

# IONIC LIQUIDS 2017

(1<sup>st</sup> edition, valid from April 1<sup>st</sup>, 2017)



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## IOLITEC – The Company

IOLITEC, founded in May 2003, is an award-winning, dynamic, innovative and goal-oriented company whose activities go far beyond the production and sale of ionic liquids and nanomaterials. With more than **1'300 customers** and **6'500 readers** of our **email bulletin "Ionic Liquids Today"**, we are one of the **global leading specialized companies in the field of ionic liquids** and **leading experts in the field of nano-dispersion technology**.



IOLITEC's HQ @ Heilbronn, Germany.



Batch production on the ton's scale.



IOLITEC @ Tuscaloosa, USA (Sales).



Quality control for best quality.



Continuous-flow-production.



High-quality ionic liquids.

With **solid experience in project management** and a **skilled team** of currently eight PhD-level chemists and engineers IOLITEC is in the strong position to give **reliable answers** and to deal with customer requests from many different sectors in a professional, efficient and goal-oriented way. Our **services include consulting and feasibility studies** as well as the development of marketable products and applications based on ionic liquids. For these purposes we can utilize a **compound library** of more than **600 ionic liquids** and an **extensive database of physical and chemical properties** compiled from data published in scientific journals and checked as well as supplemented with our own numerous measurements.

## Our Philosophy

**IOLITEC** is with all consequences a customer-oriented company: The customer is in the center of all our activities.

**IOLITEC** enjoys working hand in hand with customers and partners in a friendly and open, but also focused way. Requests are handled always confidential and they are processed fast. We like to give reliable scientific answers on the highest possible level.

**IOLITEC** collects, measures, interprets and refines physico-chemical data of ionic liquids, following our philosophy to present our customers necessary information to design or to construct methods, processes or devices using ionic liquid technology.

**IOLITEC** is driven by technology and innovation. Based on reliable data, we identify by our own research or by co-operations with partners new applications and technologies. In co-operations, we share our knowledge with partners openly and combine it in interdisciplinary research. We define ourselves as specialists in translating selected properties into the molecular structure of ionic liquids.

**IOLITEC** wants to combine the best available quality with reasonable prices. Our customers shall have as soon as possible a monetary benefit, if we identified more efficient synthetic methods or if we scaled up our capacities.

**IOLITEC** is an independent producer, supplier and distributor of ionic liquids. We like to present our customers the broadest variety of materials, covering the most common classes of ionic liquids. These facts enable our customers to choose the most suitable products for their specific needs from our comprehensive portfolio. We offer those materials, which are not part of our actual portfolio, as custom synthesis, as long as IP of others is not infringed.

## Our Products & Services

On our site at Heilbronn, Germany, we operate at well-equipped research and production facilities. The implementation of **state-of-the-art microreaction technology** enables IOLITEC to produce selected ionic liquids in a **continuous-flow-process** in quantities **of up to 250 kg per week** while meeting the highest quality standards.

**IOLITEC** offers today

- a standard portfolio of more than **300 selected ionic liquids**,
- **ionic-liquid-test-kits** for screening purposes,
- **50** ionic liquid related **key intermediates**,
- **custom syntheses** of those compounds that are not covered by IPR of third, and
- **custom R&D** based on our ionic liquid technology (on request exclusivity is possible).

IOLITEC's materials are available from the lab-scale (25 g to 5 kg) up to bulk quantities (>5 kg to 5 metric tons) for industrial applications.

## Co-operations

IOLITEC has put a strong focus on R&D services and custom syntheses in the field of ionic liquids since its formation in 2003. IOLITEC works with partners not only in the chemical industry but also in many other different sectors, e.g. engineering, electrical and automotive industries. IOLITEC's international customers are small and medium-sized companies as well as global players.

IOLITEC's own expertise is complemented by the company's close collaborations with various institutes of the Fraunhofer Gesellschaft and a number of leading research groups at universities in Europe and abroad. This network enables IOLITEC to offer a wide range of analytical methods and measurements at competitive rates. As an independent company, IOLITEC can guarantee its customers unconditional confidentiality and the best product at the best price.

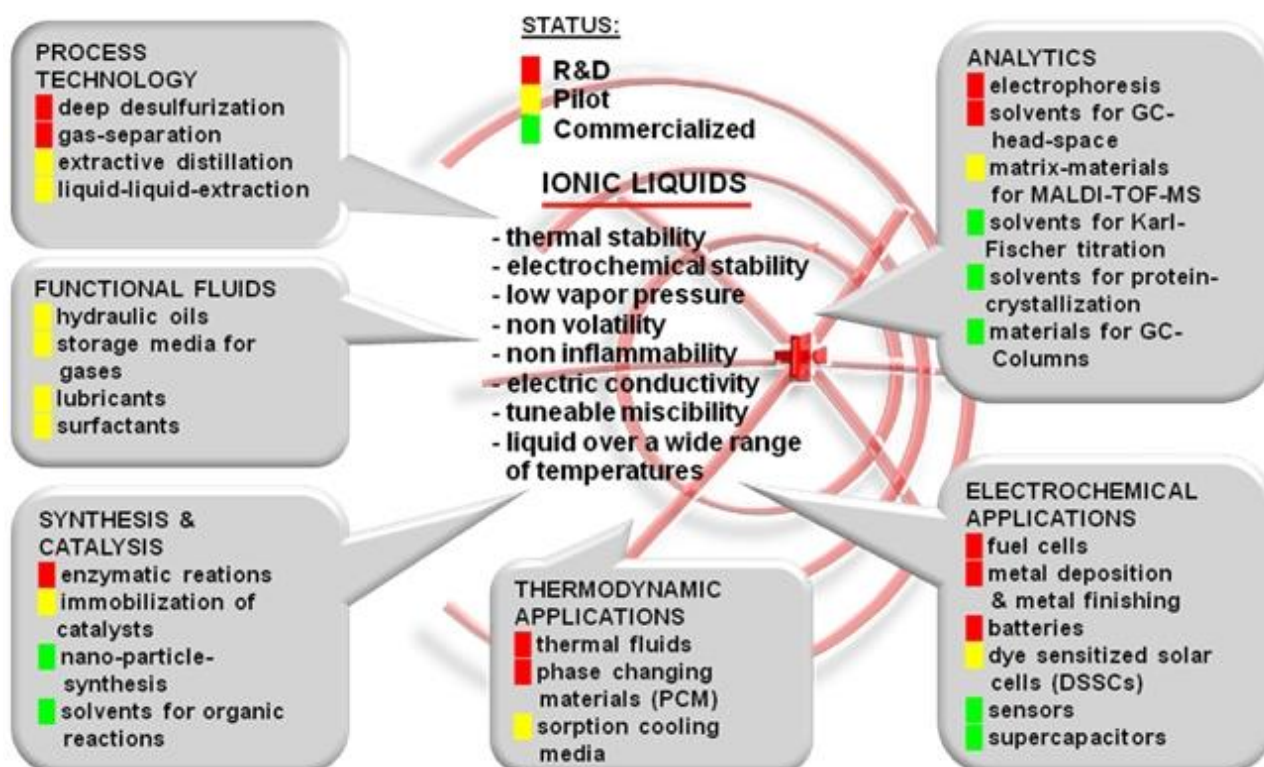
In addition to R&D services and custom syntheses, IOLITEC actively pursues its own internal R&D projects to identify new applications and open up new markets for ionic liquids and products derived therefrom. In order to protect its ideas and products IOLITEC has already filed seven patent applications in different fields and holds the rights for five registered trademarks.

## Applications

Today a number of potential applications of ionic liquids were described in literature and a couple of are already realized in industrial applications. As mentioned above, we identify new applications by our own research activities based on our core-technology.

We summarized interesting applications in our Application Sheets that are available on request. The following Application Sheets are available:

- Solvents Karl-Fischer-Titration
- Protein Crystallization
- Electrolytes for Lithium- and Lithium-ion-batteries
- Ready-to-use electrolyte for Dye Sensitized Solar Cells
- Electrodeposition
- Ionic Liquids for Inorganic Synthesis and Stabilization of Nanoparticles
- Ionic Liquids in Polymer Chemistry
- Weakly Coordinating Anions
- Organic Synthesis



Information available at

**[www.iolitec.de](http://www.iolitec.de)**

## Trading units

IOLITEC offers its products in **standard quantities**. Trading units other than those given in this publication are not available, but may be combined by available package sizes. If you wish to purchase any product in **bulk quantity** (above 5 kg up to 5 metric tons), please feel free to contact us for a quotation.

## Prices

All prices listed in this publication are **net prices** and given in Euro (€). **Shipping and handling charges** are to be added to your account (see below). **Any additional regional charges, taxes and duties are payable by the customer.**

Prices are subject to change. Please contact us for a firm quotation. All previously published price information will become void after March 31<sup>st</sup>, 2017.

## Shipping and handling

### *Germany:*

Shipments are routinely made by **UPS** ([www.ups.com](http://www.ups.com)). A handling charge of € 16.50 applies for all orders under € 250.00. Orders over € 250.00 are free of charge; exception: shipments containing dangerous goods!

### *All other destinations:*

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Terms of payment are stated on your quotation and/or purchase order confirmation. All deliveries are subject to our *General Terms and Conditions* which can be found at the end of this publication and on our website ([www.iolitec.de](http://www.iolitec.de)).

## **Contact and Order Information:**

You will receive a **purchase order confirmation by email or fax within 48 hours of receipt of your order**. Please let us know if you do not receive a purchase order confirmation within this time. No release of chemicals to private persons, business customers and research institutions only.

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## Contents

<b>Ionic Liquids Screening Kits</b>	<b>9</b>
MyKit	9
Synthesis and Catalysis-Kit	10
DSSC-Kit	11
Nano-Kits	12
Electrochemistry-Kit	13
Solvents for Crystallization of Proteins	14
<b>Electrolytes for the Aluminum Deposition</b>	<b>15</b>
<b>Ammonium-Based Ionic Liquids</b>	<b>16</b>
<b>Quarternary Ammonium Salts</b>	<b>19</b>
<b>from Evonik Industries AG</b>	
<b>Imidazolium-Based Ionic Liquids</b>	<b>20</b>
Bis(trifluoromethylsulfonyl)imides	20
Bis(pentafluoroethylsulfonyl)imides	25
Triflates	26
1,1,2,2-Tetrafluoroethanesulfonates	28
Perfluorobutanesulfonates	30
Hexafluorophosphates	31
Tetrafluoroborates	34
Chlorides	37
Bromides	40
Iodides	43
Sulfates, Sulfonates, Phosphates	45
Thiocyanates, Dicyanamides	48
Tricyanomethanides	49
Acetates, Trifluoroacetates, Nitrates, Tetrachloroferrates, Tetrathiocyanocobaltates	50
Methylcarbonates	52



<b>Piperidinium-Based Ionic Liquids</b>	<b>53</b>
<b>Pyridinium-Based Ionic Liquids</b>	<b>55</b>
Bis(trifluoromethylsulfonyl)imides	55
Triflates	57
Perfluorobutanesulfonates/Tricyanomethanides	58
Hexafluorophosphates	59
Tetrafluoroborates	60
Chlorides	61
Bromides	62
Iodides	64
<b>Pyrrolidinium-Based Ionic Liquids</b>	<b>65</b>
<b>DABCO-Based Ionic Liquids</b>	<b>69</b>
<b>Phosponium-Based Ionic Liquids</b>	<b>70</b>
<b>from Cytec Industries Inc.</b>	
<b>Sulfonium-Based Ionic Liquids</b>	<b>73</b>
<b>Ready-to-Use-Electrolytes for DSSC</b>	<b>74</b>
<b>General Terms and Conditions</b>	<b>75</b>

### **Information on physical-chemical data in this pricelist**

All physical and chemical data provided within this pricelist are influenced by temperature, water content and purity. There might be deviations compared to literature and other sources. The data make no claim to be complete and there is no accuracy of statement.

## MyKit

The introduction of our novel ionic-liquids-screening-kits is a consequence of many fruitful discussions with our customers. First of all, we switched from 25 g to 10 g, which is surely enough for the most screening purposes. Secondly, we selected 59 common ionic liquids, which are now available at **unified prices**, independently from the particular ionic liquid, but depending on the number of items:



- 5 to 9 items
- 10 to 24 items
- 25 to 50 items

MyKit starts in general with 5 and is limited to maximum 50 items. Within the 59 different ionic liquids it is possible to combine any kind and/or number of items.

1-Ethyl-3-methylimidazolium tetrafluoroborate (IL-0006-HP)	Triethylsulfonium bis(trifluoromethylsulfonyl)imide (IL-0030-HP)	1-Hexyl-3-methylimidazolium triflate (IL-0070-HP)
1-Butyl-3-methylimidazolium tetrafluoroborate (IL-0012-HP)	Methyltrioctylammonium bis(trifluoromethylsulfonyl)imide (IL-0017-HP)	1-Methyl-3-octylimidazolium triflate (IL-0073-HP)
1-Hexyl-3-methylimidazolium tetrafluoroborate (IL-0019-HP)	1-Ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide (IL-0023-HP)	1-Butyl-1-methylpyrrolidinium triflate (IL-0113-HP)
1-Methyl-3-octylimidazolium tetrafluoroborate (IL-0021-HP)	1-Methyl-3-propylimidazolium bis(trifluoromethylsulfonyl)imide (IL-0024-HP)	1-Ethyl-3-methylimidazolium thiocyanate (IL-0007-HP)
1-Butylpyridinium tetrafluoroborate (IL-0089-HP)	1,2-Dimethyl-3-propylimidazolium bis(trifluoromethylsulfonyl)imide (IL-0134-HP)	1-Ethyl-3-methylimidazolium dicyanamide (IL-0003-HP)
1-Butyl-3-methylpyridinium tetrafluoroborate (IL-0081-HP)	1-Butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide (IL-0029-HP)	1-Butyl-3-methylimidazolium dicyanamide (IL-0010-HP)
1-Butyl-4-methylpyridinium tetrafluoroborate (IL-0085-HP)	1-Butyl-2,3-dimethylimidazolium bis(trifluoromethylsulfonyl)imide (IL-0104-HP)	1-Butyl-1-methylpyrrolidinium dicyanamide (IL-0041-HP)
1-Butyl-3-methylimidazolium hexafluorophosphate (IL-0011-HP)	1-Hexyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide (IL-0098-HP)	1-Ethyl-3-methylimidazolium chloride (IL-0093-HP)
1-Hexyl-3-methylimidazolium hexafluorophosphate (IL-0018-HP)	1-Hexadecyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide (IL-0103-HP)	1-Butyl-3-methylimidazolium chloride (IL-0014-HP)
1-Methyl-3-octylimidazolium hexafluorophosphate (IL-0020-HP)	1-Allyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide (IL-0239-HP)	1-Allyl-3-methylimidazolium chloride (IL-0022-HP)
1-Butylpyridinium hexafluorophosphate (IL-0088-HP)	1-Methyl-1-propylpyrrolidinium bis(trifluoromethylsulfonyl)imide (IL-0044-HP)	Trihexyltetradecylphosphonium chloride (IN-0006-TG)
1-Butyl-3-methylpyridinium hexafluorophosphate (IL-0080-HP)	1-Butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide (IL-0035-HP)	1-Ethyl-3-methylimidazolium bromide (IL-0015-HP)
1-Butyl-4-methylpyridinium hexafluorophosphate (IL-0084-HP)	1-Methyl-1-propylpiperidinium bis(trifluoromethylsulfonyl)imide (IL-0045-HP)	1-Butyl-3-methylimidazolium bromide (IL-0037-HP)
1-Ethyl-3-methylimidazolium diethylphosphate (IL-0052-HP)	1-Butylpyridinium bis(trifluoromethylsulfonyl)imide (IL-0213-HP)	1,3-Dimethylimidazolium iodide (IL-0199-HP)
1,3-Dimethylimidazolium dimethylphosphate (IL-0053-HP)	1-Butyl-3-methylpyridinium bis(trifluoromethylsulfonyl)imide (IL-0216-HP)	1-Ethyl-3-methylimidazolium iodide (IL-0048-HP)
Choline dihydrogenphosphate (IL-0042-HP)	1-Butyl-4-methylpyridinium bis(trifluoromethylsulfonyl)imide (IL-0219-HP)	1-Methyl-3-propylimidazolium iodide (IL-0025-HP)
1-Ethyl-3-methylimidazolium ethylsulfate (IL-0033-HP)	Trihexyltetradecylphosphonium bis(trifluoromethylsulfonyl)imide (IN-0021-HP)	1-Butyl-3-methylimidazolium iodide (IL-0051-HP)
1-Ethyl-3-methylimidazolium hydrogensulfate (IL-0091-HP)	1-Ethyl-3-methylimidazolium triflate (IL-0009-HP)	1-Hexyl-3-methylimidazolium iodide (IL-0026-HP)
1-Ethyl-3-methylimidazolium acetate (IL-0189-TG)	1-Butyl-3-methylimidazolium triflate (IL-0013-HP)	1-Allyl-3-methylimidazolium iodide (IL-0231-HP)
Ethylammonium nitrate (IL-0043-SG)		

## Synthesis & Catalysis-Kit

**A**mong the various applications the use of ionic liquids in synthesis and catalysis is surely the scientific field that was studied most intensively over the past 10 years. Today there are many examples in scientific literature demonstrating that Ionic liquids enhance the reactivity and/or selectivity of a number of processes.<sup>[1]</sup>



The most important physical and chemical properties of ionic liquids for their use in synthesis and catalysis are

- tunable miscibility with many starting materials and products for an easy separation,
- tunable hydrophobicity/hydrophilicity,
- a negligible vapor pressure, and
- chemical and thermal stability.

In our database we have numerous miscibility data and an overview about those reactions that show better yields and/or selectivity, if performed it in ionic liquids.

- **1-Butyl-3-methyl-imidazolium tetrafluoroborate, 99%**
- **1-Butyl-3-methyl-imidazolium hexafluorophosphate, 99%**
- **1-Butyl-3-methyl-imidazolium trifluoromethanesulfonate, 99%**
- **1-Butyl-3-methyl-imidazolium bis(trifluoromethylsulfonyl)imide, 99%**
- **1-Butyl-3-methyl-imidazolium hydrogensulfate, 99%**

If other ionic liquids are desired, please have also a look at „myKit“.

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[1] *Ionic Liquids in Synthesis*, Second Edition, P. Wasserscheid and T. Welton (Eds.), 2008, Wiley VCH Verlags GmbH & Co. KGaA, Weinheim.

## DSSC-Kit



The Development of dye sensitized solar cells (DSSCs or Grätzel-cells) is related with the development of ionic liquids since the mid of the 1990s. Based on the fact that ionic liquids

- have **no significant vapor pressure**,
- are **electric conducting**,
- **are electrochemically and thermally stable**,

they are in general interesting electrolytes for the transport of currents in electrochemical cells and are suitable for the use in DSSCs, in particular.

Our DSSC-kit contains those ionic liquids, which are known to be most suitable for this application. It contains predominantly ionic liquids based on the iodide-Anion, which is compatible to the  $I/I_3^-$ -redox-shuttle and widely used in DSSCs. In addition, three good conducting, low viscous, and electrochemically stable ionic liquids are also included, which may be combined with iodide-based ionic liquids to enhance the overall conductivity:

- **1-Methyl-3-propylimidazolium iodide, 99%**
- **1-Butyl-3-methylimidazolium iodide, 99%**
- **1-Hexyl-3-methylimidazolium iodide, 99%**
- **1,3-Dimethylimidazolium iodide, 99%**
- **1-Methyl-2,3-dimethylimidazolium iodide, 99%**
- **1-Allyl-3-methylimidazolium iodide, 99%**
- ***N*-Propyl-*N*-Methylpyrrolidinium iodide, 99%,**
- **1-Ethyl-3-methyl-imidazolium thiocyanate, 99%**
- **1-Ethyl-3-methyl-imidazolium dicyanamide, 99%**
- **1-Ethyl-3-methyl-imidazolium bis(trifluoromethylsulfonyl)imide, 99%**

## Nano-Kits



Over the past years, ionic liquids (IL) have gained an increasing interest in the synthesis of inorganic materials and in particular in the synthesis of nanoscaled materials. The most important properties of ILs are

- the weak or non-coordinating properties of the anions,
- the polarity and surface tension and
- the possibility of supramolecular structures.

In this context, the template-effect plays often a key-role in the control of the size, the size-distribution and the shape of nano-materials. In numerous examples it was already demonstrated successfully that ILs have an significant influence on the morphology of nanomaterials, if they were used as structure-directing media for the synthesis. IOLITEC offers two different nano-kits, each containing 5 different ILs:

### Nano-Kit I: („Variation anion & chain length“)

- **1-Butyl-3-methyl-imidazolium tetrafluoroborate, 99%**
- **1-Octyl-3-methyl-imidazolium tetrafluoroborate 99%**
- **1-Butyl-3-methyl-imidazolium hexafluorophosphate, 99%**
- **1-Octyl-3-methyl-imidazolium hexafluorophosphate, 99%**
- **1-Hexadecyl-3-methylimidazolium chloride**

### Nano-Kit II: („Variation cation“)

- **1-Butyl-1-methyl-pyrrolidinium bis(trifluoromethylsulfonyl)imide, 99%**
- **1-Octyl-1-methyl-pyrrolidinium bis(trifluoromethylsulfonyl)imide, 99%**
- **N-Butyl-N-trimethylammonium bis(trifluoromethylsulfonyl)imide, 99%**
- **Triethylsulfonium bis(trifluoromethylsulfonyl)imide, 99%**
- **Trihexyl-tetradecylphosphonium bis(trifluoromethylsulfonyl)imide, 99%**

If other ionic liquids are desired, please have also a look at „myKit“.

## Electrochemistry-Kit

The fact that ionic liquids are consisting entirely of ions, causes often a sufficient to good electric conductivity, in particular for a non evaporating liquid. As a consequence, a number of ionic liquids are suitable for electrochemical applications, because they combine extraordinary electrochemical properties, such as



- **electric conductivity**
- **electrochemical stability (large electrochemical window)**
- **non flammability**
- **very low vapour pressure**

Thus, they are potentially interesting candidates for a number of different electrochemical applications. As a consequence, over the past years many applications were described in the literature:

- **Batteries**
- **(Super-)capacitors (electric double layer capacitors, EDLCs)**
- **Fuel cells**
- **Sensors**
- **Actuators**

Our electrochemistry kit, containing 5 different ionic liquids, is designed for those researchers, who have novel applications in mind and who like to start with a first set of ionic liquids that are commonly used for similar applications, where comparable properties and specifications are desired:

- **1-Butyl-1-methyl-pyrrolidinium bis(trifluoromethylsulfonyl)imide, 99%**
- **1-Ethyl-3-methyl-imidazolium triflate, 99%**
- **1-Ethyl-3-methyl-imidazolium tetrafluoroborate, 99%**
- **1-Ethyl-3-methyl-imidazolium bis(trifluoromethylsulfonyl)imide, 99%**
- ***N*-Butyl-*N*-trimethylammonium bis(trifluoromethylsulfonyl)imide, 99%**

If other ionic liquids are desired, please have also a look at „myKit“.

## Solvents for Crystallization of Proteins

Over the past years a couple of papers were published, in which the use of ionic liquids in biocatalysis and/or the influence of ionic liquids on proteins was described. A very early study from *Magnusson et al.* described the activating influence of a poor concentration of ethylammonium nitrate  $[\text{EtNH}_3]^+ \text{NO}_3^-$  on the phosphatase from *E. coli*.<sup>[1]</sup> *Iborra et al.* investigated 2001 the positive influence of different ionic liquids on stability and reactivity of  $\alpha$ -chymotrypsine by using a transesterification reaction as an example.<sup>[2]</sup> In another work, these results were confirmed by fluorescence- and CD-spectroscopy.<sup>[3]</sup>



*Lange et al.* reported that ionic liquids accelerate the folding of selected proteins.<sup>[4]</sup> Recently, *MacFarlane et al.* demonstrated successfully that a group of biocompatible ionic liquids is in the position to dissolve and to stabilize Cytochrome-C.<sup>[5]</sup>

Our own research focused on the stabilization and crystallization of enzymes, e.g. using Lysozyme in a number of different ionic liquids.<sup>[6]</sup>

Our protein-crystallization kit contains 4 typical ionic liquids:

- **1-Ethyl-3-methyl-imidazolium acetate, >95%**
- **1-Ethyl-3-methyl-imidazolium diethylphosphate, 98%**
- **1-Ethyl-3-methyl-imidazolium trifluoromethanesulfonate, 99%**
- **1-Ethyl-3-methyl-imidazolium ethylsulfate, 99%**
- **1-Butyl-3-methyl-pyrrolidinium bis(trifluoromethylsulfonyl)imid, 99%**
- **1-Butyl-3-methyl-imidazolium dicyanamid, 98%**
- **Triisobutylmethylphosphonium tosylate, >95%**
- ***N*-Butyl-*N*-trimethylammonium bis(trifluoromethylsulfonyl)imide, 99%**
- **Ethanolammonium formiate, >97%**
- **Ethylammonium nitrate, >97%**

If other ionic liquids are desired, please have also a look at „myKit“.

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[1] D. K. Magnuson et.al., *J.Solution Chem.* **1984**, *13*, 583-587.

[2] J. L. Iborra et.al., *Biotechnology and Bioengineering* **2001**, *75*, 563-569.

[3] J. L. Iborra et.al., *Biotechnology and Bioengineering* **2004**, *88*, 916-924.

[4] C. Lange et.al., *Protein Science* **2005**, *14*, 2693-2701.

[5] D. R. MacFarlane et.al., *Chem. Comm.* 2005, 4804-4806.

[6] T.J. Schubert, A. Bösmann, *Patent Pending*, **2004**, DE102004027196.

# ELECTROLYTES FOR THE ALUMINUM-DEPOSITION

Products 2017



<b>1-Ethyl-3-methylimidazolium chloride and Aluminum chloride (1:1.5)</b>		
EP-0001-HP	[80432-05-9]	--
		25 g
		50 g
		100 g
		250 g
		500 g
		1 kg
		5 kg

<b>Ready-to use electrolyte based on 1-Ethyl-3-methylimidazolium chloride</b>		
EP-0003-HP	[80432-05-9]	--
		25 g
		50 g
		100 g
		250 g
		500 g
		1 kg
		5 kg

<b>1-Butyl-3-methylimidazolium chloride and Aluminum chloride (1:1.5)</b>		
EP-0002-HP	[80432-09-3]	--
		25 g
		50 g
		100 g
		250 g
		500 g
		1 kg
		5 kg

<b>Ready-to use electrolyte based on 1-Butyl-3-methylimidazolium chloride</b>		
EP-0004-HP	[80432-09-3]	--
		25 g
		50 g
		100 g
		250 g
		500 g
		1 kg
		5 kg

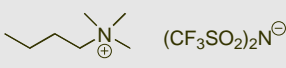
We offer several other electrolytes on request. Please contact us, if you are interested in other ratios of the ionic liquid and aluminum chloride or in mixtures of aluminum chloride with other ionic liquids.



**Butyltrimethylammonium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0032-HP [258273-75-5] C<sub>9</sub>H<sub>18</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 396.37

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

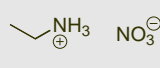


m.p.: <RT η (25 °C): 99.5 cP σ (30 °C): 2.86 mS/cm ρ (24 °C): 1.40 g/cm<sup>3</sup>

**Ethylammonium nitrate, >97%**

IL-0043-SG [22113-86-6] C<sub>2</sub>H<sub>9</sub>N<sub>2</sub>O<sub>3</sub> MW 108.11

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

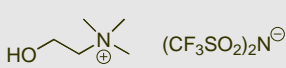


m.p.: <RT η (25 °C): 36.5 cP σ (30 °C): 25.4 mS/cm ρ (36 °C): 1.21 g/cm<sup>3</sup>

**Choline bis(trifluoromethylsulfonyl)imide, 99%**

IL-0110-HP [827027-25-8] C<sub>7</sub>H<sub>14</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 368.32

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

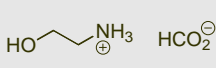


m.p.: 35-37 °C η (45 °C): 49.5 cP σ (45 °C): 3.98 mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**2-Hydroxyethylammonium formate, >97%**

IL-0034-SG [53226-35-0] C<sub>3</sub>H<sub>9</sub>NO<sub>3</sub> MW 107.11

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

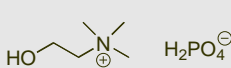


m.p.: <RT η (25 °C): 188 cP σ (30 °C): 4.40 mS/cm ρ (24 °C): 1.20 g/cm<sup>3</sup>

**Choline dihydrogen phosphate, >98%**

IL-0042-HP [83846-92-8] C<sub>5</sub>H<sub>16</sub>NPO<sub>5</sub> MW 201.16

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

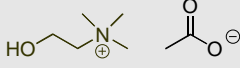


m.p.: 190 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**Choline acetate, 98%**

IL-0322-HP [14586-35-7] C<sub>7</sub>H<sub>17</sub>NO<sub>3</sub> MW 163.21

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

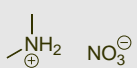


m.p.: <RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**Dimethylammonium nitrate, >97%**

IL-0126-SG [30781-73-8] C<sub>2</sub>H<sub>8</sub>N<sub>2</sub>O<sub>3</sub> MW 108.10

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

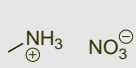


m.p.: 75 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**Methylammonium nitrate, >97%**

IL-0124-SG [22113-87-7] CH<sub>6</sub>N<sub>2</sub>O<sub>3</sub> MW 94.07

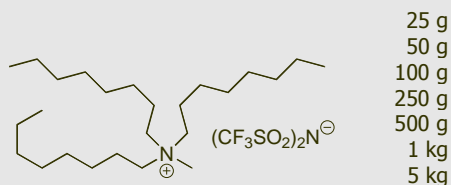
25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 101 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

### Methyltrioctylammonium bis(trifluoromethylsulfonyl)imide, 99%

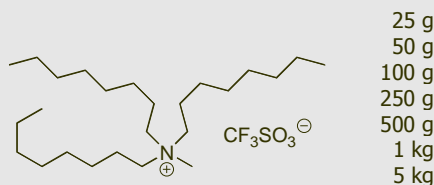
IL-0017-HP [375395-33-8]  $C_{27}H_{54}F_6N_2O_4S_2$  MW 648.85



m.p.: <RT  $\eta$  (25 °C): 530 cP  $\sigma$  (25 °C): 0.09 mS/cm  $\rho$  (27 °C): 1.15 g/cm<sup>3</sup>

### Methyltrioctylammonium trifluoromethanesulfonate, >97%

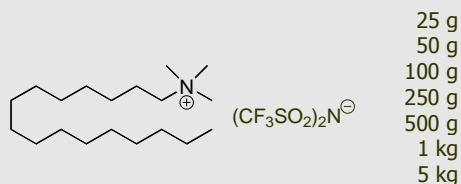
IL-0118-HP [121107-18-4]  $C_{26}H_{54}F_3NO_3S$  MW 517.77



m.p.: 57 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

### Hexadecyltrimethylammonium bis(trifluoromethylsulfonyl)imide, 99%

IL-0327-HP [1031250-01-7]  $C_{21}H_{42}F_6N_2O_4S_2$  MW 564.69



m.p.: >RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

### Diethylmethylammonium trifluoromethanesulfonate, 98%

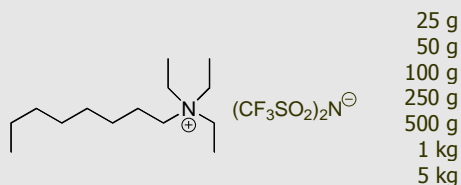
IL-0326-HP [945715-39-9]  $C_6H_{14}F_3NO_3S$  MW 237.24



m.p.: <RT  $\eta$  (25 °C): 37.7 cP  $\sigma$  (30 °C): 8.10 mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

### Octyltriethylammonium bis(trifluoromethylsulfonyl)imide, 98%

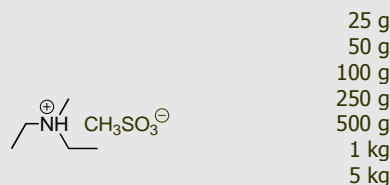
IL-0328-HP [210230-48-1]  $C_{16}H_{32}F_6N_2O_4S_2$  MW 494.56



m.p.: <RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

### Diethylmethylammonium methanesulfonate, 98%

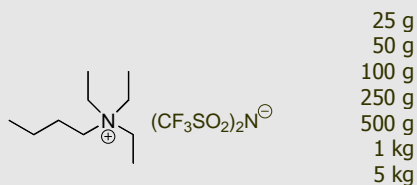
IL-0325-HP [945715-44-6]  $C_6H_{17}NO_3S$  MW 183.27



m.p.: <RT  $\eta$  (25 °C): 111 cP  $\sigma$  (40 °C): 6.20 mS/cm  $\rho$  (38 °C): 1.12 g/cm<sup>3</sup>

### Butyltriethylammonium bis(trifluoromethylsulfonyl)imide, 99%

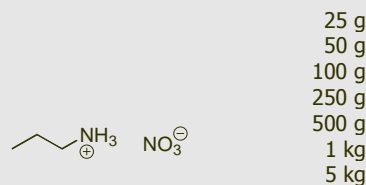
IL-0329-HP [324574-91-6]  $C_{12}H_{24}F_6N_2O_4S_2$  MW 438.45



m.p.: <RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

### Propylammonium nitrate, >97%

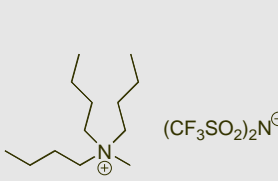
IL-0125-SG [22113-88-8]  $C_3H_{10}N_2O_3$  MW 122.12



m.p.: <RT  $\eta$  (25 °C): 66.4 cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): 1.15 g/cm<sup>3</sup>

**Tributylmethyammonium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0117-HP [405514-94-5] C<sub>15</sub>H<sub>30</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 480.53

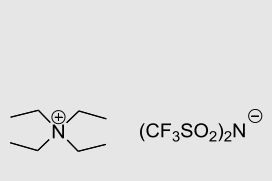


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 522 cP    σ (30 °C): 0.48 mS/cm    ρ (23 °C): 1.26 g/cm<sup>3</sup>

**Tetraethylammonium bis(trifluoromethylsulfonyl)imide, >98%**

IL-0335-HP [161401-26-9] C<sub>10</sub>H<sub>20</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 410.40

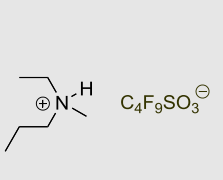


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

***N*-Ethyl-*N*-methyl-*N*-propylammonium perfluorobutanesulfonate, 99%**

IL-0338-HP [1186599-90-5] C<sub>10</sub>H<sub>16</sub>F<sub>9</sub>NO<sub>3</sub>S MW 401.07

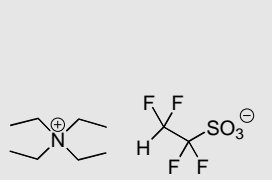


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**Tetraethylammonium 1,1,2,2-tetrafluoroethanesulfonate, >98%**

IL-0238-SG [---] C<sub>10</sub>H<sub>21</sub>F<sub>4</sub>NO<sub>3</sub>S MW 311.33

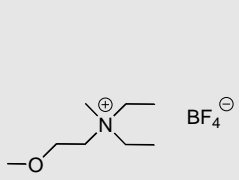


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

***N,N*-Diethyl-*N*-methyl-*N*-(2-methoxyethyl) ammonium tetrafluoroborate, 99%**

IL-0123-HP [464927-72-8] C<sub>8</sub>H<sub>20</sub>BF<sub>4</sub>NO MW 233.06

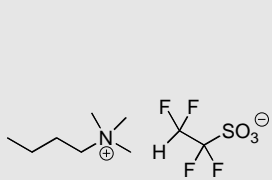


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

Only available in the European Union and the USA. Produced by Nissinbo Industries.

**Butyltrimethylammonium 1,1,2,2-tetrafluoroethanesulfonate, 99%**

IL-0237-HP [---] C<sub>9</sub>H<sub>19</sub>F<sub>4</sub>NO<sub>3</sub>S MW 297.31

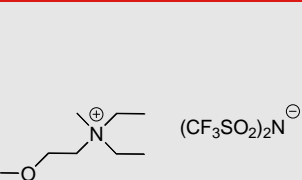


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

***N,N*-Diethyl-*N*-methyl-*N*-(2-methoxyethyl) ammonium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0116-HP [464927-84-2] C<sub>10</sub>H<sub>20</sub>F<sub>6</sub>N<sub>2</sub>O<sub>5</sub>S<sub>2</sub> MW 426.40



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

Only available in the European Union and the USA. Produced by Nissinbo Industries.

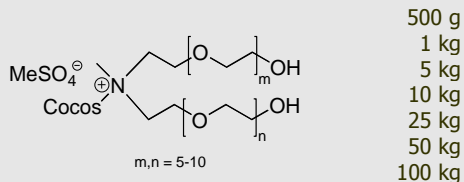
# QUARTERNARY AMMONIUM SALTS FROM EVONIK INDUSTRIES AG

Products 2017



## IoLiLyte® C1EG, >95%

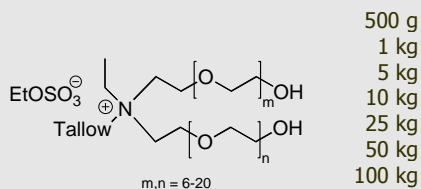
IN-0022-TG [68989-03-7]



A product of Evonik Industries AG (TEGO IL K5MS)

## IoLiLyte® T2EG, >95%

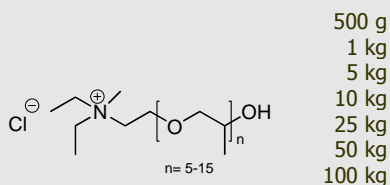
IN-0023-TG [68071-95-4]



A product of Evonik Industries AG (TEGO IL T16ES)

## IoLiLyte® 221PG >95%

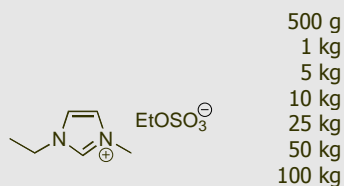
IN-0024-TG [68132-96-7]



A product of Evonik Industries AG (TEGO IL P9)

## IoLiLyte® 12IM, >95%

IN-0026-HP [342573-75-5] C<sub>8</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub>S MW 236.29



A product of Evonik Industries AG (TEGO IL IMES)

# IMIDAZOLIUM-BASED BIS(TRIFLUOROMETHYLSULFONYL)IMIDES

Products 2017



## 1-Methylimidazolium bis(trifluoromethylsulfonyl)imide, 98%

IL-0261-SG [353239-08-4] C<sub>6</sub>H<sub>7</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 363.26

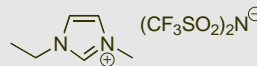


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 49 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, 99.5%

IL-0023-UP [174899-82-2] C<sub>8</sub>H<sub>11</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 391.31

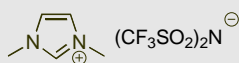


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -3 °C η (20 °C): 39.4 cP σ (20 °C): 6.63 mS/cm ρ (20 °C): 1.52 g/cm<sup>3</sup>

## 1,3-Dimethylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

IL-0198-HP [174899-81-1] C<sub>7</sub>H<sub>9</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 377.28

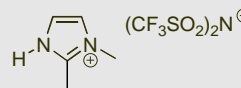


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 37.1 cP σ (30 °C): 9.36 mS/cm ρ (22 °C): 1.57 g/cm<sup>3</sup>

## 1,2-Dimethylimidazolium bis(trifluoromethylsulfonyl)imide, 98%

IL-0278-SG [353239-12-0] C<sub>7</sub>H<sub>9</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 377.28

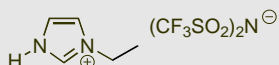


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 106 cP σ (25 °C): 1.08 mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Ethylimidazolium bis(trifluoromethylsulfonyl)imide, 98%

IL-0269-SG [353239-10-8] C<sub>7</sub>H<sub>9</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 377.28

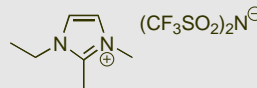


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 57.2 cP σ (30 °C): 4.01 mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Ethyl-2,3-dimethylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

IL-0106-HP [174899-90-2] C<sub>9</sub>H<sub>13</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 405.34



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 25 °C η (25 °C): 68.5 cP σ (20 °C): 3.18 mS/cm ρ (25 °C): 1.49 g/cm<sup>3</sup>

## 1-Ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

IL-0023-HP [174899-82-2] C<sub>8</sub>H<sub>11</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 391.31

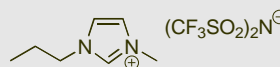


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -3 °C η (20 °C): 39.4 cP σ (20 °C): 6.63 mS/cm ρ (20 °C): 1.52 g/cm<sup>3</sup>

## 1-Methyl-3-propylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

IL-0024-HP [216299-72-8] C<sub>9</sub>H<sub>13</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 405.34



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 43.8 cP σ (20 °C): 4.40 mS/cm ρ (18 °C): 1.48 g/cm<sup>3</sup>

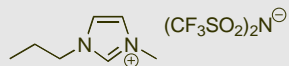
# IMIDAZOLIUM-BASED BIS(TRIFLUOROMETHYLSULFONYL)IMIDES

Products 2017



## 1-Methyl-3-propylimidazolium bis(trifluoromethylsulfonyl)imide, 99.5%

IL-0024-UP [216299-72-8] C<sub>9</sub>H<sub>13</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 405.34

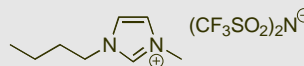


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 43.8 cP    σ (20 °C): 4.40 mS/cm    ρ (18 °C): 1.48 g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, 99.5%

IL-0029-UP [174899-83-3] C<sub>10</sub>H<sub>15</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 419.37

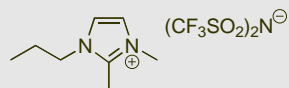


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -4 °C    η (25 °C): 48.8 cP    σ (25 °C): 3.41 mS/cm    ρ (19 °C): 1.44 g/cm<sup>3</sup>

## 1,2-Dimethyl-3-propylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

IL-0134-HP [169051-76-7] C<sub>10</sub>H<sub>15</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 419.36

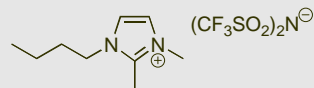


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 91.9 cP    σ (25 °C): 1.95 mS/cm    ρ (25 °C): 1.45 g/cm<sup>3</sup>

## 1-Butyl-2,3-dimethylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

IL-0104-HP [350493-08-2] C<sub>11</sub>H<sub>17</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 433.39

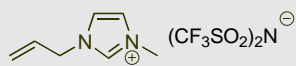


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 98.0 cP    σ (25 °C): 1.96 mS/cm    ρ (25 °C): 1.42 g/cm<sup>3</sup>

## 1-Allyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

IL-0239-HP [655249-87-9] C<sub>9</sub>H<sub>11</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 403.32

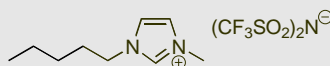


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 35.0 cP    σ (30 °C): 8.87 mS/cm    ρ (29 °C): 1.49 g/cm<sup>3</sup>

## 1-Methyl-3-pentylimidazolium bis(trifluoromethylsulfonyl)imide, >99%

IL-0300-HP [280779-53-5] C<sub>11</sub>H<sub>17</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 433.39

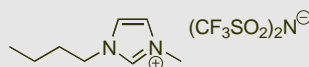


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 59.3 cP    σ (30 °C): 3.28 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

IL-0029-HP [174899-83-3] C<sub>10</sub>H<sub>15</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 419.37

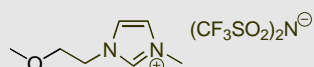


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -4 °C    η (25 °C): 48.8 cP    σ (25 °C): 3.41 mS/cm    ρ (19 °C): 1.44 g/cm<sup>3</sup>

## 1-(2-Methoxyethyl)-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

IL-0333-HP [178631-01-1] C<sub>9</sub>H<sub>13</sub>F<sub>6</sub>N<sub>3</sub>O<sub>5</sub>S<sub>2</sub> MW 421.34



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 46.9 cP    σ (30 °C): 4.81 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

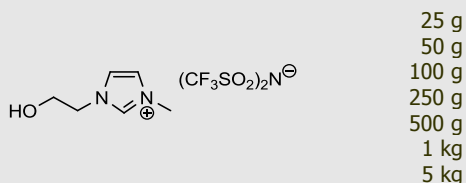
# IMIDAZOLIUM-BASED BIS(TRIFLUOROMETHYLSULFONYL)IMIDES

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## 1-(2-Hydroxyethyl)-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

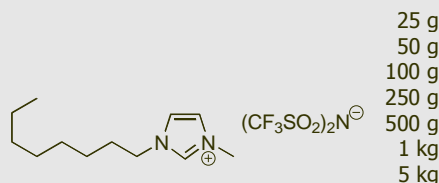
IL-0194-HP [174899-86-6] C<sub>8</sub>H<sub>11</sub>F<sub>6</sub>N<sub>3</sub>O<sub>5</sub>S<sub>2</sub> MW 407.31



m.p.: <RT    η (25 °C): 81.6 cP    σ (25 °C): 1.68 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-octylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

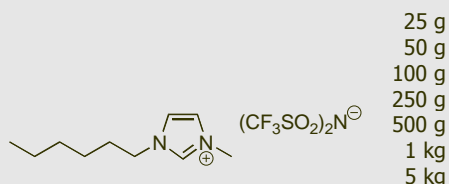
IL-0099-HP [178631-04-4] C<sub>14</sub>H<sub>23</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 475.47



m.p.: <RT    η (25 °C): 86.6 cP    σ (30 °C): 1.60 mS/cm    ρ (25 °C): 1.32 g/cm<sup>3</sup>

## 1-Hexyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

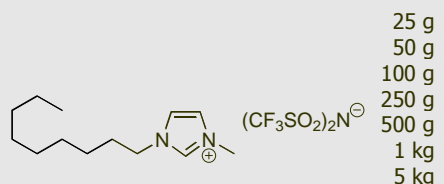
IL-0098-HP [382150-50-7] C<sub>12</sub>H<sub>19</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 447.42



m.p.: <RT    η (25 °C): 63.2 cP    σ (30 °C): 2.27 mS/cm    ρ (29 °C): 1.37 g/cm<sup>3</sup>

## 1-Methyl-3-nonylimidazolium bis(trifluoromethylsulfonyl)imide, >99%

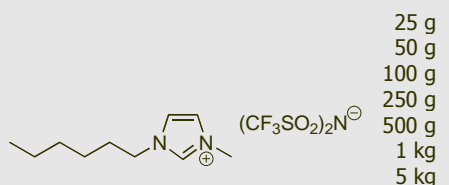
IL-0302-HP [433337-21-4] C<sub>15</sub>H<sub>25</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 489.50



m.p.: <RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Hexyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, 99.5%

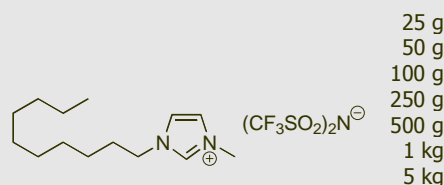
IL-0098-UP [382150-50-7] C<sub>12</sub>H<sub>19</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 447.42



m.p.: <RT    η (25 °C): 63.2 cP    σ (30 °C): 2.27 mS/cm    ρ (29 °C): 1.37 g/cm<sup>3</sup>

## 1-Decyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, >98%

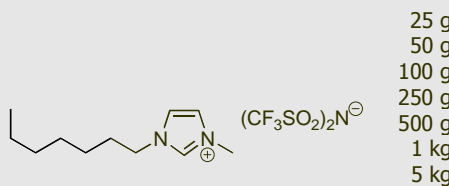
IL-0100-HP [433337-23-6] C<sub>16</sub>H<sub>27</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 503.53



m.p.: <RT    η (25 °C): 113 cP    σ (24 °C): 0.76 mS/cm    ρ (30 °C): 1.27 g/cm<sup>3</sup>

## 1-Heptyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, >99%

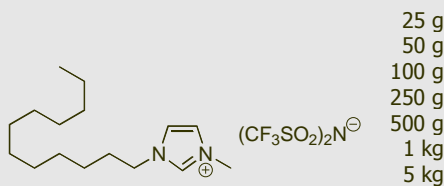
IL-0301-HP [425382-14-5] C<sub>13</sub>H<sub>21</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 461.44



m.p.: <RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Dodecyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, >98%

IL-0101-HP [404001-48-5] C<sub>18</sub>H<sub>31</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 531.58



m.p.: <RT    η (25 °C): 136 cP    σ (30 °C): 0.82 mS/cm    ρ (22 °C): 1.25 g/cm<sup>3</sup>

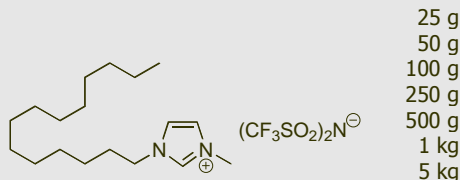
# IMIDAZOLIUM-BASED BIS(TRIFLUOROMETHYLSULFONYL)IMIDES

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## 1-Methyl-3-tetradecylimidazolium bis(trifluoromethylsulfonyl)imide, >98%

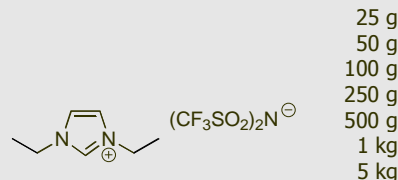
IL-0102-HP [404001-49-6] C<sub>20</sub>H<sub>35</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 559.63



m.p.: 38 °C η (25 °C): ~ cP σ (30 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1,3-Diethylimidazolium bis(trifluoromethylsulfonyl)imide, 98%

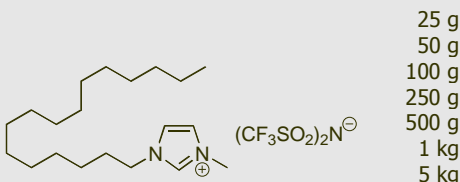
IL-0188-HP [174899-88-8] C<sub>9</sub>H<sub>13</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 405.34



m.p.: 14 °C η (25 °C): 27.9 cP σ (30 °C): 8.24 mS/cm ρ (22 °C): 1.48 g/cm<sup>3</sup>

## 1-Hexadecyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, >98%

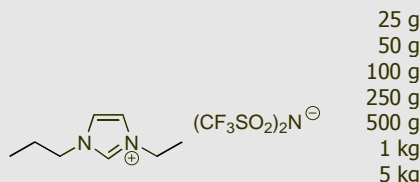
IL-0103-HP [404001-50-9] C<sub>22</sub>H<sub>39</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 578.69



m.p.: 49 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Ethyl-3-propylimidazolium bis(trifluoromethylsulfonyl)imide, 98%

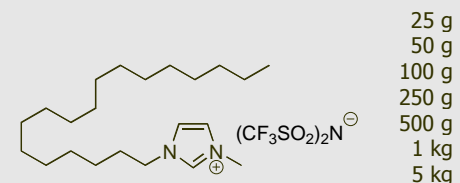
IL-0285-HP [347882-21-7] C<sub>10</sub>H<sub>15</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 419.36



m.p.: <RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-octadecylimidazolium bis(trifluoromethylsulfonyl)imide, >98%

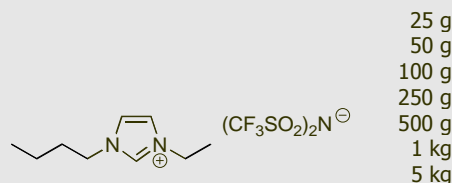
IL-0200-HP [404001-51-0] C<sub>24</sub>H<sub>43</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 615.74



m.p.: 55-60 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-ethylimidazolium bis(trifluoromethylsulfonyl)imide, 98%

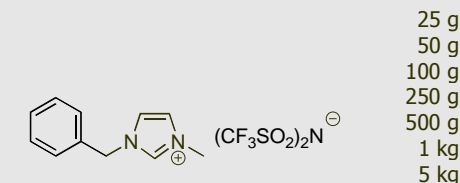
IL-0289-HP [174899-89-9] C<sub>11</sub>H<sub>17</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 433.39



m.p.: <RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Benzyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, 99%

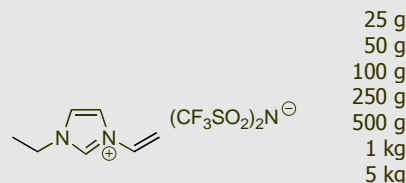
IL-0241-HP [433337-24-7] C<sub>13</sub>H<sub>13</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 453.38



m.p.: <RT η (25 °C): 153 cP σ (30 °C): 1.77 mS/cm ρ (25 °C): 1.49 g/cm<sup>3</sup>

## 1-Ethyl-3-vinylimidazolium bis(trifluoromethylsulfonyl)imide, 98%

IL-0291-HP [204854-22-8] C<sub>9</sub>H<sub>11</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 403.32



m.p.: <RT η (25 °C): 47.0 cP σ (25 °C): 2.69 mS/cm ρ (25 °C): 1.50 g/cm<sup>3</sup>



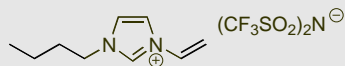
# IMIDAZOLIUM-BASED BIS(TRIFLUOROMETHYLSULFONYL)IMIDES

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## 1-Butyl-3-vinylimidazolium bis(trifluoromethylsulfonyl)imide, 98%

IL-0293- HP [758716-72-2]  $C_{11}H_{15}F_6N_3O_4S_2$  MW 431.37



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 77.4 cP  $\sigma$  (25 °C): 1.41 mS/cm  $\rho$  (25 °C): 1.42 g/cm<sup>3</sup>

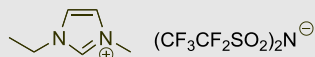
# IMIDAZOLIUM-BASED BIS(PENTAFLUOROETHYLSULFONYL)IMIDES

Products 2017



## 1-Ethyl-3-methylimidazolium bis(pentafluoroethylsulfonyl)imide, 98%

IL-0320-HP [216299-76-2]  $C_{10}H_{11}F_{10}N_3O_4S_2$  MW 491.32

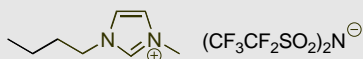


1 g  
2 g  
5 g  
50 g

m.p.: <RT     $\eta$  (25 °C): ~ cP     $\sigma$  (25 °C): ~ mS/cm     $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium bis(pentafluoroethylsulfonyl)imide, 98%

IL-0321-HP [254731-29-8]  $C_{12}H_{15}F_{10}N_3O_4S_2$  MW 519.37



1 g  
2 g  
5 g  
50 g

m.p.: <RT     $\eta$  (25 °C): 111 cP     $\sigma$  (30 °C): 1.76 mS/cm     $\rho$  (25 °C): ~ g/cm<sup>3</sup>

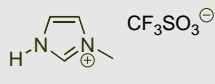
# IMIDAZOLIUM-BASED TRIFLATES

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## 1-Methylimidazolium trifluoromethanesulfonate, 98%

IL-0263-SG [99257-94-0] C<sub>4</sub>H<sub>7</sub>F<sub>3</sub>N<sub>2</sub>O<sub>3</sub>S MW 232.18

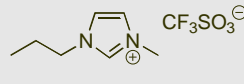


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-propylimidazolium trifluoromethanesulfonate, 99%

IL-0296-HP [878550-45-9] C<sub>8</sub>H<sub>13</sub>F<sub>3</sub>N<sub>2</sub>O<sub>3</sub>S MW 274.26

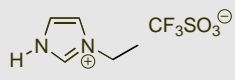


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Ethylimidazolium trifluoromethanesulfonate, 98%

IL-0271-SG [501693-46-5] C<sub>6</sub>H<sub>9</sub>F<sub>3</sub>N<sub>2</sub>O<sub>3</sub>S MW 246.21

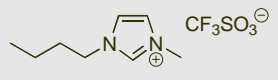


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT    η (25 °C): ~ cP    σ (30 °C): 5.96 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium trifluoromethanesulfonate, 99%

IL-0013-HP [174899-66-2] C<sub>9</sub>H<sub>15</sub>F<sub>3</sub>N<sub>2</sub>O<sub>3</sub>S MW 288.29

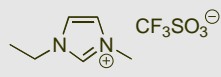


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 16 °C    η (25 °C): 80.0 cP    σ (20 °C): 3.05 mS/cm    ρ (25 °C): 1.30 g/cm<sup>3</sup>

## 1-Ethyl-3-methylimidazolium trifluoromethanesulfonate, 99%

IL-0009-HP [145022-44-2] C<sub>7</sub>H<sub>11</sub>F<sub>3</sub>N<sub>2</sub>O<sub>3</sub>S MW 260.24

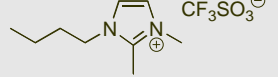


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -9 °C    η (25 °C): 39.8 cP    σ (30 °C): 9.84 mS/cm    ρ (25 °C): 1.39 g/cm<sup>3</sup>

## 1-Butyl-2,3-dimethylimidazolium trifluoromethanesulfonate, 99%

IL-0059-HP [765910-73-4] C<sub>10</sub>H<sub>17</sub>F<sub>3</sub>N<sub>2</sub>O<sub>3</sub>S MW 302.32

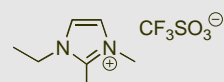


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 40 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Ethyl-2,3-dimethylimidazolium trifluoromethanesulfonate, 99%

IL-0002-HP [174899-72-0] C<sub>8</sub>H<sub>13</sub>F<sub>3</sub>N<sub>2</sub>O<sub>3</sub>S MW 274.26

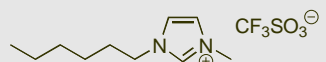


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 105 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Hexyl-3-methylimidazolium trifluoromethanesulfonate, 99%

IL-0070-HP [460345-16-8] C<sub>11</sub>H<sub>19</sub>F<sub>3</sub>N<sub>2</sub>O<sub>3</sub>S MW 316.34



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 135 cP    σ (24 °C): 1.61 mS/cm    ρ (29 °C): 1.24 g/cm<sup>3</sup>

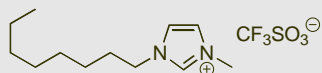
# IMIDAZOLIUM-BASED TRIFLATES

Products 2017



## 1-Methyl-3-octylimidazolium trifluoromethanesulfonate, 99%

IL-0073-HP [403842-84-2]  $C_{13}H_{23}F_3N_2O_3S$  MW 344.40

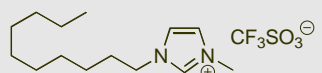


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -20 °C  $\eta$  (25 °C): 225 cP  $\sigma$  (24 °C): 0.58 mS/cm  $\rho$  (25 °C): 1.20 g/cm<sup>3</sup>

## 1-Decyl-3-methylimidazolium trifluoromethanesulfonate, 99%

IL-0068-HP [412009-62-2]  $C_{15}H_{27}F_3N_2O_3S$  MW 372.45

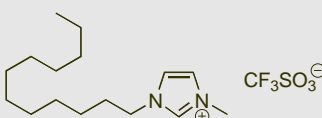


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 298 cP  $\sigma$  (24 °C): 0.41 mS/cm  $\rho$  (26 °C): 1.15 g/cm<sup>3</sup>

## 1-Dodecyl-3-methylimidazolium trifluoromethanesulfonate, 99%

IL-0133-HP [404001-52-1]  $C_{17}H_{31}F_3N_2O_3S$  MW 400.50



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 47 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

# IMIDAZOLIUM-BASED 1,1,2,2-TETRAFLUOROETHANESULFONATES

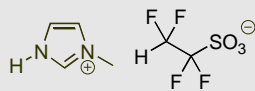
Products 2017



**1-Methylimidazolium  
1,1,2,2-tetrafluoroethanesulfonate, 98%**

IL-0262-SG [---] C<sub>6</sub>H<sub>8</sub>F<sub>4</sub>N<sub>2</sub>O<sub>3</sub>S MW 264.20

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

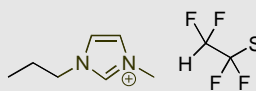


m.p.: <RT    η (25 °C): 136 cP    σ (30 °C): 1.50 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-3-propylimidazolium  
1,1,2,2-tetrafluoroethanesulfonate, 99%**

IL-0233-HP [---] C<sub>9</sub>H<sub>14</sub>F<sub>4</sub>N<sub>2</sub>O<sub>3</sub>S MW 306.27

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

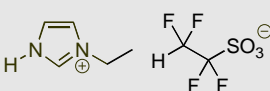


m.p.: ~ °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethylimidazolium  
1,1,2,2-tetrafluoroethanesulfonate, 98%**

IL-0270-SG [---] C<sub>7</sub>H<sub>10</sub>F<sub>4</sub>N<sub>2</sub>O<sub>3</sub>S MW 278.22

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

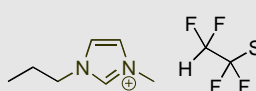


m.p.: ~ °C    η (25 °C): ~ cP    σ (30 °C): 1.63 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-3-propylimidazolium  
1,1,2,2-tetrafluoroethanesulfonate, >98%**

IL-0233-SG [---] C<sub>9</sub>H<sub>14</sub>F<sub>4</sub>N<sub>2</sub>O<sub>3</sub>S MW 306.27

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

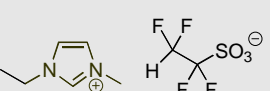


m.p.: ~ °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium  
1,1,2,2-tetrafluoroethanesulfonate, 99%**

IL-0232-HP [880084-63-9] C<sub>8</sub>H<sub>12</sub>F<sub>4</sub>N<sub>2</sub>O<sub>3</sub>S MW 292.25

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

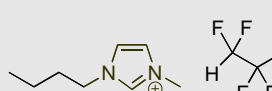


m.p.: <RT    η (25 °C): 86.4 cP    σ (30 °C): 4.17 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-3-methylimidazolium  
1,1,2,2-tetrafluoroethanesulfonate, 99%**

IL-0234-HP [880084-62-8] C<sub>10</sub>H<sub>14</sub>F<sub>4</sub>N<sub>2</sub>O<sub>3</sub>S MW 320.29

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

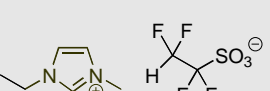


m.p.: <RT    η (25 °C): 168 cP    σ (30 °C): 0.88 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium  
1,1,2,2-tetrafluoroethanesulfonate, >98%**

IL-0232-SG [880084-63-9] C<sub>8</sub>H<sub>12</sub>F<sub>4</sub>N<sub>2</sub>O<sub>3</sub>S MW 292.25

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

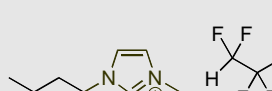


m.p.: <RT    η (25 °C): 86.4 cP    σ (30 °C): 4.17 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-3-methylimidazolium  
1,1,2,2-tetrafluoroethanesulfonate, >98%**

IL-0234-SG [880084-62-8] C<sub>10</sub>H<sub>14</sub>F<sub>4</sub>N<sub>2</sub>O<sub>3</sub>S MW 320.29

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



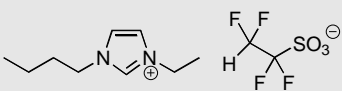
m.p.: <RT    η (25 °C): 168 cP    σ (30 °C): 0.88 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

# IMIDAZOLIUM-BASED 1,1,2,2-TETRAFLUOROETHANESULFONATES Products 2017

**1-Butyl-3-ethylimidazolium  
1,1,2,2-tetrafluoroethanesulfonate, >98%**

IL-0255-SG      [---]      C<sub>11</sub>H<sub>18</sub>F<sub>4</sub>N<sub>2</sub>O<sub>3</sub>S      MW 311.33

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

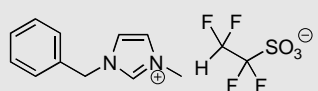


m.p.: ~ °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Benzyl-3-methylimidazolium  
1,1,2,2-tetrafluoroethanesulfonate, >98%**

IL-0254-SG      [---]      C<sub>13</sub>H<sub>14</sub>F<sub>4</sub>N<sub>2</sub>O<sub>3</sub>S      MW 354.07

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 42 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

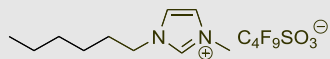
# IMIDAZOLIUM-BASED PERFLUOROBUTANESULFONATES

Products 2017



## 1-Hexyl-3-methylimidazolium perfluorobutanesulfonate, >99%

IL-0311-HP [1001557-05-6]  $C_{14}H_{19}F_9N_2O_3S$  MW 466.36

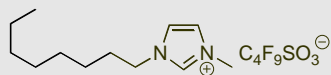


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 376 cP  $\sigma$  (30 °C): 0.41 mS/cm  $\rho$  (28 °C): 1.39 g/cm<sup>3</sup>

## 1-Methyl-3-octylimidazolium perfluorobutanesulfonate, >99%

IL-0312-HP [905972-83-0]  $C_{16}H_{23}F_9N_2O_3S$  MW 494.42



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 35 °C  $\eta$  (40 °C): 171 cP  $\sigma$  (40 °C): 0.46 mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

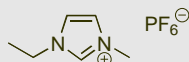
# IMIDAZOLIUM-BASED HEXAFLUOROPHOSPHATES

Products 2017



## 1-Ethyl-3-methylimidazolium hexafluorophosphate, 99%

IL-0122-HP [155371-19-0] C<sub>6</sub>H<sub>11</sub>F<sub>6</sub>N<sub>2</sub>P MW 256.13

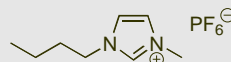


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 64 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium hexafluorophosphate, 99.5%

IL-0011-UP [174501-64-5] C<sub>8</sub>H<sub>15</sub>F<sub>6</sub>N<sub>2</sub>P MW 284.18

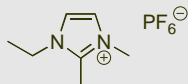


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -8 °C η (25 °C): 267 cP σ (30 °C): 1.92 mS/cm ρ (23 °C): 1.37 g/cm<sup>3</sup>

## 1-Ethyl-2,3-dimethylimidazolium hexafluorophosphate, 99%

IL-0139-HP [292140-86-4] C<sub>7</sub>H<sub>13</sub>F<sub>6</sub>N<sub>2</sub>P MW 270.16

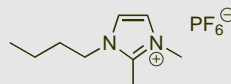


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 79 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-2,3-dimethylimidazolium hexafluorophosphate, 99%

IL-0057-HP [227617-70-1] C<sub>9</sub>H<sub>17</sub>F<sub>6</sub>N<sub>2</sub>P MW 298.21

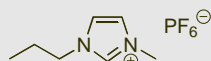


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 43 °C η (45 °C): 554 cP σ (45 °C): 0.76 mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-propylimidazolium hexafluorophosphate, 99%

IL-0142-HP [216300-12-8] C<sub>7</sub>H<sub>13</sub>F<sub>6</sub>N<sub>2</sub>P MW 270.16

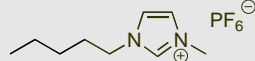


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 41 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-pentylimidazolium hexafluorophosphate, >99%

IL-0306-HP [280779-52-4] C<sub>9</sub>H<sub>17</sub>F<sub>6</sub>N<sub>2</sub>P MW 298.21

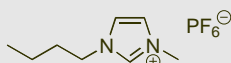


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium hexafluorophosphate, 99%

IL-0011-HP [174501-64-5] C<sub>8</sub>H<sub>15</sub>F<sub>6</sub>N<sub>2</sub>P MW 284.18

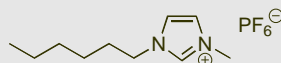


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -8 °C η (25 °C): 267 cP σ (30 °C): 1.92 mS/cm ρ (23 °C): 1.37 g/cm<sup>3</sup>

## 1-Hexyl-3-methylimidazolium hexafluorophosphate, 99%

IL-0018-HP [304680-35-1] C<sub>10</sub>H<sub>19</sub>F<sub>6</sub>N<sub>2</sub>P MW 312.24



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 465 cP σ (30 °C): 0.80 mS/cm ρ (23 °C): 1.30 g/cm<sup>3</sup>



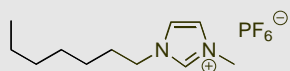
# IMIDAZOLIUM-BASED HEXAFLUOROPHOSPHATES

Products 2017



## 1-Heptyl-3-methylimidazolium hexafluorophosphate, >99%

IL-0307-HP [357915-04-9] C<sub>11</sub>H<sub>21</sub>F<sub>6</sub>N<sub>2</sub>P MW 326.26

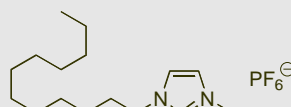


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Dodecyl-3-methylimidazolium hexafluorophosphate, >98%

IL-0095-HP [219947-93-0] C<sub>16</sub>H<sub>31</sub>F<sub>6</sub>N<sub>2</sub>P MW 396.96

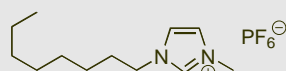


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 60 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-octylimidazolium hexafluorophosphate, 99%

IL-0020-HP [304680-36-2] C<sub>12</sub>H<sub>23</sub>F<sub>6</sub>N<sub>2</sub>P MW 340.29

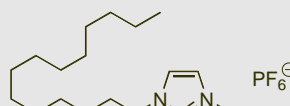


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 608 cP    σ (30 °C): 0.44 mS/cm    ρ (24 °C): 1.24 g/cm<sup>3</sup>

## 1-Methyl-3-tetradecylimidazolium hexafluorophosphate, >98%

IL-0157-HP [219947-94-1] C<sub>18</sub>H<sub>35</sub>F<sub>6</sub>N<sub>2</sub>P MW 424.45

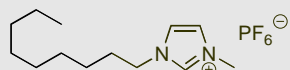


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 69 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-nonylimidazolium hexafluorophosphate, >99%

IL-0308-HP [343952-29-4] C<sub>13</sub>H<sub>25</sub>F<sub>6</sub>N<sub>2</sub>P MW 354.32

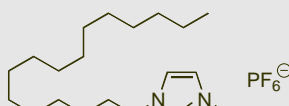


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Hexadecyl-3-methylimidazolium hexafluorophosphate, >98%

IL-0158-HP [219947-95-2] C<sub>20</sub>H<sub>39</sub>F<sub>6</sub>N<sub>2</sub>P MW 452.50

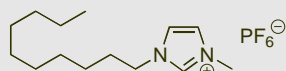


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 125 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Decyl-3-methylimidazolium hexafluorophosphate, >98%

IL-0066-HP [362043-46-7] C<sub>14</sub>H<sub>27</sub>F<sub>6</sub>N<sub>2</sub>P MW 368.34

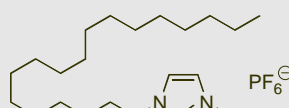


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 30-35 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-octadecylimidazolium hexafluorophosphate, >98%

IL-0159-HP [219947-96-3] C<sub>22</sub>H<sub>43</sub>F<sub>6</sub>N<sub>2</sub>P MW 480.55



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 88 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

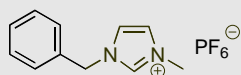
# IMIDAZOLIUM-BASED HEXAFLUOROPHOSPHATES

Products 2017



## 1-Benzyl-3-methylimidazolium hexafluorophosphate, 99%

IL-0187-HP [433337-11-2]  $C_{11}H_{13}F_6N_2P$  MW 318.20

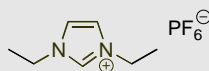


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 135 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1,3-Diethylimidazolium hexafluorophosphate, 98%

IL-0281-HP [370085-15-7]  $C_7H_{13}F_6N_2P$  MW 270.16

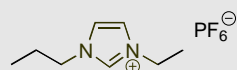


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Ethyl-3-propylimidazolium hexafluorophosphate, 98%

IL-0284-HP [1770850-03-7]  $C_8H_{15}F_6N_2P$  MW 284.18

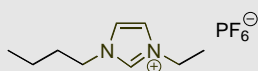


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-ethylimidazolium hexafluorophosphate, 98%

IL-0288-HP [256647-89-9]  $C_9H_{17}F_6N_2P$  MW 298.21



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

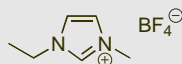
# IMIDAZOLIUM-BASED TETRAFLUOROBORATES

Products 2017



## 1-Ethyl-3-methylimidazolium tetrafluoroborate, >98%

IL-0006-HP [143314-16-3] C<sub>6</sub>H<sub>11</sub>BF<sub>4</sub>N<sub>2</sub> MW 197.97

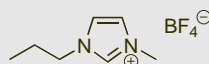


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 15 °C η (25 °C): 33.8 cP σ (25 °C): 14.1 mS/cm ρ (24 °C): 1.28 g/cm<sup>3</sup>

## 1-Methyl-3-propylimidazolium tetrafluoroborate, >98%

IL-0143-HP [244193-48-4] C<sub>7</sub>H<sub>13</sub>BF<sub>4</sub>N<sub>2</sub> MW 212.00

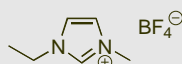


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 74.4 cP σ (25 °C): ~ mS/cm ρ (20 °C): 1.27 g/cm<sup>3</sup>

## 1-Ethyl-3-methylimidazolium tetrafluoroborate, 99%

IL-0006-UP [143314-16-3] C<sub>6</sub>H<sub>11</sub>BF<sub>4</sub>N<sub>2</sub> MW 197.97

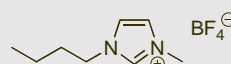


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 15 °C η (25 °C): 33.8 cP σ (25 °C): 14.1 mS/cm ρ (24 °C): 1.28 g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium tetrafluoroborate, 99%

IL-0012-HP [174501-65-6] C<sub>8</sub>H<sub>15</sub>BF<sub>4</sub>N<sub>2</sub> MW 226.02

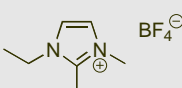


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 104 cP σ (20 °C): 3.15 mS/cm ρ (24 °C): 1.30 g/cm<sup>3</sup>

## 1-Ethyl-2,3-dimethylimidazolium tetrafluoroborate, >98%

IL-0001-HP [307492-75-7] C<sub>7</sub>H<sub>13</sub>BF<sub>4</sub>N<sub>2</sub> MW 212.00

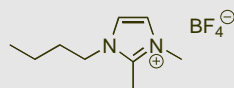


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 104 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-2,3-dimethylimidazolium tetrafluoroborate, 99%

IL-0058-HP [402846-78-0] C<sub>9</sub>H<sub>17</sub>BF<sub>4</sub>N<sub>2</sub> MW 240.05

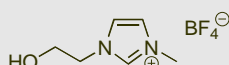


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 36 °C η (45 °C): 172 cP σ (45 °C): 2.16 mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-(2-Hydroxyethyl)-3-methylimidazolium tetrafluoroborate, >98%

IL-0038-HP [374564-83-7] C<sub>6</sub>H<sub>11</sub>BF<sub>4</sub>N<sub>2</sub>O MW 213.97

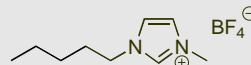


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (20 °C): 137 cP σ (20 °C): 3.42 mS/cm ρ (22 °C): 1.34 g/cm<sup>3</sup>

## 1-Methyl-3-pentylimidazolium tetrafluoroborate, >99%

IL-0303-HP [244193-49-5] C<sub>9</sub>H<sub>17</sub>BF<sub>4</sub>N<sub>2</sub> MW 240.05



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

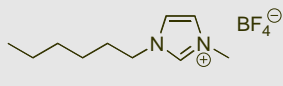
# IMIDAZOLIUM-BASED TETRAFLUOROBORATES

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## 1-Hexyl-3-methylimidazolium tetrafluoroborate, 99%

IL-0019-HP [244193-50-8] C<sub>10</sub>H<sub>19</sub>BF<sub>4</sub>N<sub>2</sub> MW 254.08

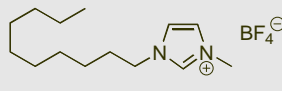


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (20 °C): 288 cP    σ (20 °C): 1.18 mS/cm    ρ (24 °C): 1.15 g/cm<sup>3</sup>

## 1-Decyl-3-methylimidazolium tetrafluoroborate, >98%

IL-0067-HP [244193-56-4] C<sub>14</sub>H<sub>27</sub>BF<sub>4</sub>N<sub>2</sub> MW 310.18

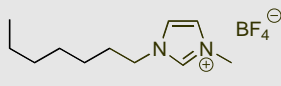


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -4 °C    η (18 °C): 721 cP    σ (25 °C): ~ mS/cm    ρ (20 °C): 1.07 g/cm<sup>3</sup>

## 1-Heptyl-3-methylimidazolium tetrafluoroborate, >99%

IL-0304-HP [244193-51-9] C<sub>11</sub>H<sub>21</sub>BF<sub>4</sub>N<sub>2</sub> MW 268.10

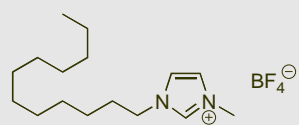


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Dodecyl-3-methylimidazolium tetrafluoroborate, >98%

IL-0132-HP [244193-59-7] C<sub>16</sub>H<sub>31</sub>BF<sub>4</sub>N<sub>2</sub> MW 338.24

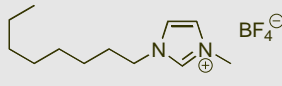


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 26 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-octylimidazolium tetrafluoroborate, 99%

IL-0021-HP [244193-52-0] C<sub>12</sub>H<sub>23</sub>BF<sub>4</sub>N<sub>2</sub> MW 282.13

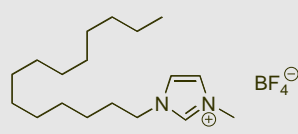


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (20 °C): 760 cP    σ (30 °C): 1.27 mS/cm    ρ (19 °C): 1.11 g/cm<sup>3</sup>

## 1-Methyl-3-tetradecylimidazolium tetrafluoroborate, >98%

IL-0256-HP [244193-61-1] C<sub>18</sub>H<sub>35</sub>BF<sub>4</sub>N<sub>2</sub> MW 266.28

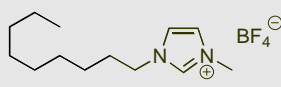


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 37 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-nonylimidazolium tetrafluoroborate, >99%

IL-0305-HP [244193-55-3] C<sub>13</sub>H<sub>25</sub>BF<sub>4</sub>N<sub>2</sub> MW 296.16

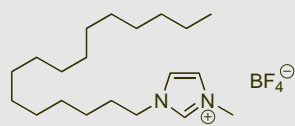


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Hexadecyl-3-methylimidazolium tetrafluoroborate, >98%

IL-0097-HP [244193-64-4] C<sub>20</sub>H<sub>39</sub>BF<sub>4</sub>N<sub>2</sub> MW 394.34



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 55 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

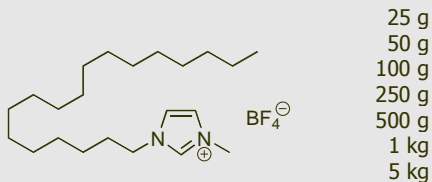
# IMIDAZOLIUM-BASED TETRAFLUOROBORATES

Products 2017



## 1-Methyl-3-octadecylimidazolium tetrafluoroborate, >98%

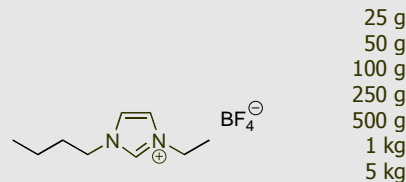
IL-0210-HP [244193-65-5]  $C_{22}H_{43}BF_4N_2$  MW 422.39



m.p.: 65 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-ethylimidazolium tetrafluoroborate, 98%

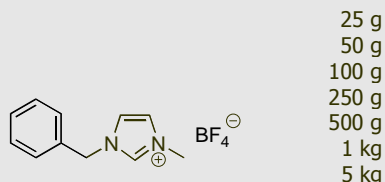
IL-0287- HP [581101-91-9]  $C_9H_{17}BF_4N_2$  MW 240.05



m.p.: <RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Benzyl-3-methylimidazolium tetrafluoroborate, 99%

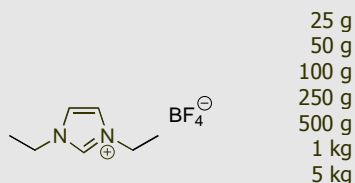
IL-0193-HP [500996-04-3]  $C_{11}H_{13}BF_4N_2$  MW 260.04



m.p.: 78 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1,3-Diethylimidazolium tetrafluoroborate, 98%

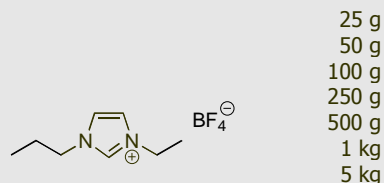
IL-0280- HP [847335-65-3]  $C_7H_{13}BF_4N_2$  MW 212.00



m.p.: ~ °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Ethyl-3-propylimidazolium tetrafluoroborate, 98%

IL-0283-HP [--]  $C_8H_{15}BF_4N_2$  MW 226.02



m.p.: <RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

# IMIDAZOLIUM-BASED CHLORIDES

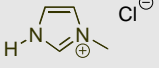
Products 2017



**1-Methylimidazolium chloride, 98%**

IL-0094-SG [35487-17-3]  $C_4H_7ClN_2$  MW 118.57

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

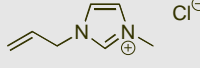


m.p.: >RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**1-Allyl-3-methylimidazolium chloride, >98%**

IL-0022-HP [65039-10-3]  $C_7H_{11}N_2Cl$  MW 158.63

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

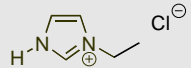


m.p.: 47 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**1-Ethylimidazolium chloride, 98%**

IL-0275-SG [81505-35-3]  $C_5H_9ClN_2$  MW 132.59

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

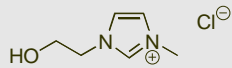


m.p.: >RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**1-(2-Hydroxyethyl)-3-methylimidazolium chloride, 99%**

IL-0039-HP [61755-34-8]  $C_6H_{11}ClN_2O$  MW 162.62

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

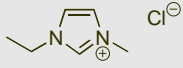


m.p.: 83 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium chloride, >95%**

IL-0093-TG [65039-09-0]  $C_6H_{11}ClN_2$  MW 146.62

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

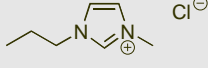


m.p.: 87 °C filled in as melt!

**1-Methyl-3-propylimidazolium chloride, >98%**

IL-0144-HP [79917-89-8]  $C_7H_{13}ClN_2$  MW 160.64

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

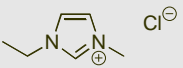


m.p.: 60 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium chloride, >98%**

IL-0093-HP [65039-09-0]  $C_6H_{11}ClN_2$  MW 146.62

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

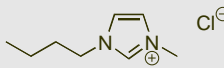


m.p.: 87 °C filled in as crystalline solid!

**1-Butyl-3-methylimidazolium chloride, 99%**

IL-0014-HP [79917-90-1]  $C_8H_{15}ClN_2$  MW 174.67

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 65 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

# IMIDAZOLIUM-BASED CHLORIDES

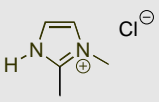
Products 2017



**1,2-Dimethylimidazolium chloride, 98%**

IL-0277-SG [34531-53-8] C<sub>5</sub>H<sub>9</sub>ClN<sub>2</sub> MW 132.59

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

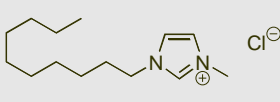


m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Decyl-3-methylimidazolium chloride, >98%**

IL-0065-HP [171058-18-7] C<sub>14</sub>H<sub>27</sub>ClN<sub>2</sub> MW 258.83

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

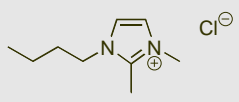


m.p.: >25°C    η (35 °C): 8570 cP    σ (30 °C): 0.02 mS/cm    ρ (25 °C): 0.99 g/cm<sup>3</sup>

**1-Butyl-2,3-dimethylimidazolium chloride, 99%**

IL-0056-HP [98892-75-2] C<sub>9</sub>H<sub>17</sub>ClN<sub>2</sub> MW 188.70

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

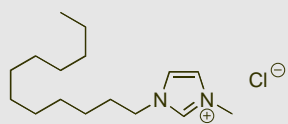


m.p.: 100 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Dodecyl-3-methylimidazolium chloride, >98%**

IL-0120-HP [114569-84-5] C<sub>16</sub>H<sub>31</sub>ClN<sub>2</sub> MW 286.89

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

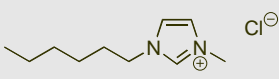


m.p.: 150 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Hexyl-3-methylimidazolium chloride, >98%**

IL-0054-HP [171058-17-6] C<sub>10</sub>H<sub>19</sub>ClN<sub>2</sub> MW 202.72

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

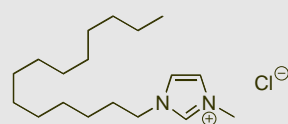


m.p.: <RT    η (35 °C): 3302 cP    σ (30 °C): 0.08 mS/cm    ρ (26 °C): 1.04 g/cm<sup>3</sup>

**1-Methyl-3-tetradecylimidazolium chloride, >98%**

IL-0141-HP [171058-21-2] C<sub>18</sub>H<sub>35</sub>ClN<sub>2</sub> MW 314.94

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

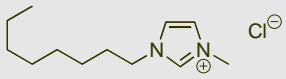


m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-3-octylimidazolium chloride, >98%**

IL-0072-HP [64697-40-1] C<sub>12</sub>H<sub>23</sub>ClN<sub>2</sub> MW 230.78

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

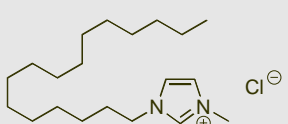


m.p.: <RT    η (35 °C): 3690 cP    σ (30 °C): 0.09 mS/cm    ρ (24 °C): 1.01 g/cm<sup>3</sup>

**1-Hexadecyl-3-methylimidazolium chloride, >98%**

IL-0115-HP [61546-01-8] C<sub>20</sub>H<sub>39</sub>ClN<sub>2</sub> MW 343.00

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 210 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

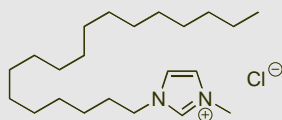
# IMIDAZOLIUM-BASED CHLORIDES

Products 2017



## 1-Methyl-3-octadecylimidazolium chloride, >98%

IL-0160-HP [171058-19-8]  $C_{22}H_{43}ClN_2$  MW 371.04

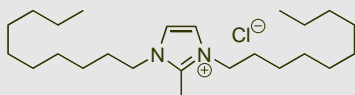


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 210 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1,3-Didecyl-2-methylimidazolium chloride, >98%

IL-0046-HP [70862-65-6]  $C_{24}H_{47}ClN_2$  MW 399.10

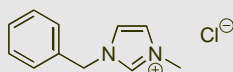


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 160 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Benzyl-3-methylimidazolium chloride, 99%

IL-0140-HP [36443-80-8]  $C_{11}H_{13}ClN_2$  MW 208.69



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 75 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>



# IMIDAZOLIUM-BASED BROMIDES

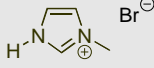
Products 2017



**1-Methylimidazolium bromide, 98%**

IL-0267-SG [101023-58-9] C<sub>4</sub>H<sub>7</sub>BrN<sub>2</sub> MW 163.02

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

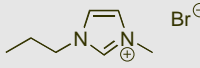


m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-3-propylimidazolium bromide, 99%**

IL-0096-HP [85100-76-1] C<sub>7</sub>H<sub>13</sub>BrN<sub>2</sub> MW 205.10

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

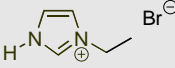


m.p.: 28 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethylimidazolium bromide, 98%**

IL-0276-SG [501693-36-3] C<sub>5</sub>H<sub>9</sub>BrN<sub>2</sub> MW 177.04

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

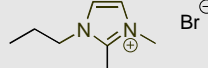


m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1,2-Dimethyl-3-propylimidazolium bromide, 99%**

IL-0229-HP [107937-17-7] C<sub>8</sub>H<sub>15</sub>BrN<sub>2</sub> MW 219.12

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

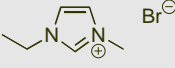


m.p.: 120 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium bromide, 99%**

IL-0015-HP [65039-08-9] C<sub>6</sub>H<sub>11</sub>BrN<sub>2</sub> MW 191.07

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

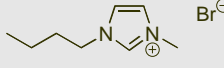


m.p.: 91 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-3-methylimidazolium bromide, 99%**

IL-0037-HP [85100-77-2] C<sub>8</sub>H<sub>15</sub>BrN<sub>2</sub> MW 219.12

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

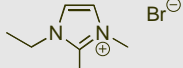


m.p.: 81 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-2,3-dimethylimidazolium bromide, 99%**

IL-0135-HP [98892-76-3] C<sub>7</sub>H<sub>13</sub>BrN<sub>2</sub> MW 205.10

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

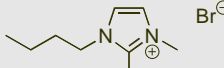


m.p.: 140 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-2,3-dimethylimidazolium bromide, 99%**

IL-0055-HP [475575-45-2] C<sub>9</sub>H<sub>17</sub>BrN<sub>2</sub> MW 233.15

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 104 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

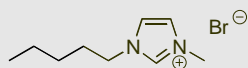
# IMIDAZOLIUM-BASED BROMIDES

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## 1-Methyl-3-pentylimidazolium bromide, >99%

IL-0297-HP [343851-31-0] C<sub>9</sub>H<sub>17</sub>BrN<sub>2</sub> MW 233.15

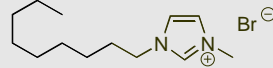


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-nonylimidazolium bromide, >99%

IL-0299-HP [343851-34-3] C<sub>13</sub>H<sub>25</sub>BrN<sub>2</sub> MW 289.26

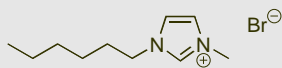


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Hexyl-3-methylimidazolium bromide, 99%

IL-0069-HP [85100-78-3] C<sub>10</sub>H<sub>19</sub>BrN<sub>2</sub> MW 247.18

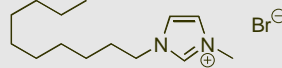


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 3822 cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Decyl-3-methylimidazolium bromide, >98%

IL-0064-HP [188589-32-4] C<sub>14</sub>H<sub>27</sub>BrN<sub>2</sub> MW 303.28

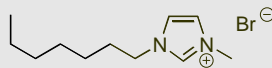


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (18 °C): 18020 cP σ (25 °C): 0.07 mS/cm ρ (25 °C): 1.13 g/cm<sup>3</sup>

## 1-Heptyl-3-methylimidazolium bromide, >99%

IL-0298-HP [343851-32-1] C<sub>11</sub>H<sub>21</sub>BrN<sub>2</sub> MW 261.20

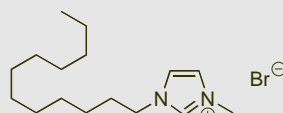


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 6680 cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Dodecyl-3-methylimidazolium bromide, >98%

IL-0119-HP [61546-00-7] C<sub>16</sub>H<sub>31</sub>BrN<sub>2</sub> MW 331.34

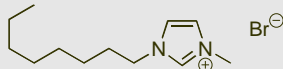


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 112 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Methyl-3-octylimidazolium bromide, 99%

IL-0071-HP [61545-99-1] C<sub>12</sub>H<sub>23</sub>BrN<sub>2</sub> MW 275.23

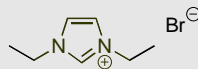


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 6604 cP σ (30 °C): 0.06 mS/cm ρ (24 °C): 1.17 g/cm<sup>3</sup>

## 1,3-Diethylimidazolium bromide, 98%

IL-0279-HP [54304-66-4] C<sub>7</sub>H<sub>13</sub>BrN<sub>2</sub> MW 205.10



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

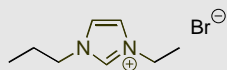
# IMIDAZOLIUM-BASED BROMIDES

Products 2017



## 1-Ethyl-3-propylimidazolium bromide, 98%

IL-0282- HP [637348-59-5]  $C_8H_{15}BrN_2$  MW 219.11

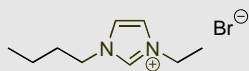


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-ethylimidazolium bromide, 98%

IL-0286- HP [174899-64-0]  $C_9H_{17}BrN_2$  MW 233.15

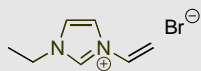


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Ethyl-3-vinylimidazolium bromide, 98%

IL-0290- HP [34311-88-1]  $C_7H_{11}BrN_2$  MW 203.08

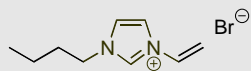


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-vinylimidazolium bromide, 98%

IL-0292- HP [34311-90-5]  $C_9H_{15}BrN_2$  MW 231.13



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

# IMIDAZOLIUM-BASED IODIDES

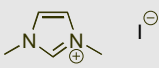
Products 2017



**1,3-Dimethylimidazolium iodide, >98%**

IL-0199-HP [4333-62-4] C<sub>5</sub>H<sub>9</sub>IN<sub>2</sub> MW 224.04

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

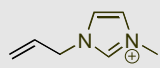


m.p.: 81 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Allyl-3-methylimidazolium iodide, >98%**

IL-0231-HP [65039-07-8] C<sub>7</sub>H<sub>11</sub>N<sub>2</sub>I MW 250.08

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg




m.p.: 57 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium iodide, >98%**

IL-0048-HP [35935-34-3] C<sub>6</sub>H<sub>11</sub>IN<sub>2</sub> MW 238.07

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

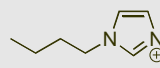


m.p.: 80-85 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-3-methylimidazolium iodide, >98%**

IL-0051-HP [65039-05-6] C<sub>8</sub>H<sub>15</sub>IN<sub>2</sub> MW 266.12

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

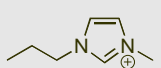


m.p.: <RT η (25 °C): 1183 cP σ (25 °C): 0.52 mS/cm ρ (25 °C): 1.48 g/cm<sup>3</sup>

**1-Methyl-3-propylimidazolium iodide, >98%**

IL-0025-HP [119171-18-5] C<sub>7</sub>H<sub>13</sub>IN<sub>2</sub> MW 252.10

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

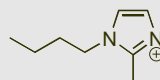


m.p.: <RT η (25 °C): 935 cP σ (30 °C): 0.96 mS/cm ρ (24 °C): 1.54 g/cm<sup>3</sup>

**1-Butyl-2,3-dimethylimidazolium iodide, >98%**

IL-0137-HP [108203-70-9] C<sub>9</sub>H<sub>17</sub>IN<sub>2</sub> MW 280.15

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

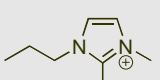


m.p.: 85 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1,2-Dimethyl-3-propylimidazolium iodide, >98%**

IL-0049-HP [218151-78-1] C<sub>8</sub>H<sub>15</sub>IN<sub>2</sub> MW 266.12

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

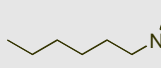


m.p.: 94 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Hexyl-3-methylimidazolium iodide, >98%**

IL-0026-HP [178631-05-5] C<sub>10</sub>H<sub>19</sub>IN<sub>2</sub> MW 294.18

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: <RT η (25 °C): 1730 cP σ (25 °C): 0.25 mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

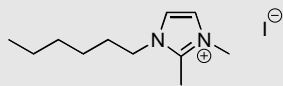
# IMIDAZOLIUM-BASED IODIDES

Products 2017



## 1-Hexyl-2,3-dimethylimidazolium iodide, >98%

IL-0138-HP [288627-94-1]  $C_{11}H_{21}IN_2$  MW 308.07

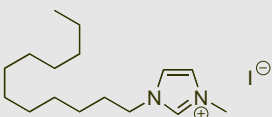


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 79 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Dodecyl-3-methylimidazolium iodide, >98%

IL-0136-HP [81995-09-7]  $C_{16}H_{31}IN_2$  MW 378.34



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 40 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

# IMIDAZOLIUM-BASED SULFATES, SULFONATES, PHOSPHATES

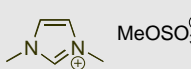
Products 2017



**1,3-Dimethylimidazolium methyl sulfate, 99%**

IL-0243-HP [97345-90-9] C<sub>6</sub>H<sub>12</sub>N<sub>2</sub>O<sub>4</sub>S MW 208.24

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

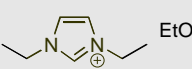


m.p.: <RT    η (25 °C): 70.0 cP    σ (30 °C): 4.02 mS/cm    ρ (26 °C): 1.32 g/cm<sup>3</sup>

**1,3-Diethylimidazolium ethyl sulfate, 99%**

IL-0244-HP [516474-04-7] C<sub>9</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>S MW 250.32

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

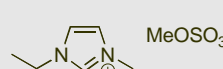


m.p.: <RT    η (25 °C): 94.2 cP    σ (25 °C): ~ mS/cm    ρ (22 °C): 1.21 g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium methyl sulfate, >98%**

IL-0112-HP [516474-01-4] C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>4</sub>S MW 222.26

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

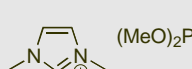


m.p.: <RT    η (25 °C): 64.0 cP    σ (25 °C): ~ mS/cm    ρ (26 °C): 1.28 g/cm<sup>3</sup>

**1,3-Dimethylimidazolium dimethyl phosphate, >98%**

IL-0053-HP [654058-04-5] C<sub>7</sub>H<sub>15</sub>N<sub>2</sub>O<sub>4</sub>P MW 222.18

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

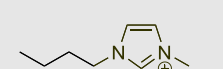


m.p.: <RT    η (25 °C): 437 cP    σ (30 °C): 0.84 mS/cm    ρ (24 °C): 1.15 g/cm<sup>3</sup>

**1-Butyl-3-methylimidazolium methyl sulfate, >98%**

IL-0195-HP [401788-98-5] C<sub>9</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>S MW 250.32

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

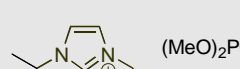


m.p.: <RT    η (25 °C): 163 cP    σ (30 °C): 2.20 mS/cm    ρ (21 °C): 1.22 g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium dimethyl phosphate, >98%**

IL-0220-HP [945611-27-8] C<sub>9</sub>H<sub>19</sub>N<sub>2</sub>O<sub>3</sub>P MW 236.21

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

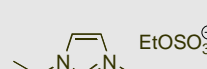


m.p.: 23 °C    η (25 °C): ~ cP    σ (30 °C): 1.86 mS/cm    ρ (22 °C): 1.22 g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium ethyl sulfate, 99%**

IL-0033-HP [342573-75-5] C<sub>8</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub>S MW 236.29

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

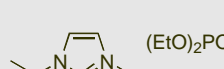


m.p.: <RT    η (25 °C): 94.2 cP    σ (30 °C): 5.56 mS/cm    ρ (24 °C): 1.24 g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium diethyl phosphate, >98%**

IL-0052-HP [848641-69-0] C<sub>10</sub>H<sub>21</sub>N<sub>2</sub>O<sub>4</sub>P MW 264.26

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: <RT    η (25 °C): ~ cP    σ (30 °C): 0.84 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

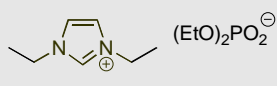
# IMIDAZOLIUM-BASED SULFATES, SULFONATES, PHOSPHATES

Products 2017



## 1,3-Diethylimidazolium diethyl phosphate, >98%

IL-0245-HP [945406-32-6] C<sub>11</sub>H<sub>23</sub>N<sub>2</sub>O<sub>4</sub>P MW 278.29

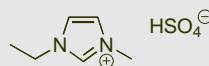


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 280 cP    σ (30 °C): 0.97 mS/cm    ρ (24 °C): 1.12 g/cm<sup>3</sup>

## 1-Ethyl-3-methylimidazolium hydrogen sulfate, 99%

IL-0091-HP [412009-61-1] C<sub>6</sub>H<sub>12</sub>N<sub>2</sub>O<sub>4</sub>S MW 208.24

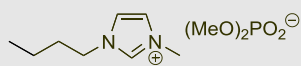


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 1510 cP    σ (20 °C): 0.50 mS/cm    ρ (28 °C): 1.36 g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium dimethyl phosphate, >98%

IL-0257-HP [891772-94-4] C<sub>10</sub>H<sub>21</sub>N<sub>2</sub>O<sub>4</sub>P MW 264.26

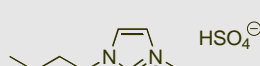


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 534 cP    σ (30 °C): 0.56 mS/cm    ρ (20 °C): 1.16 g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium hydrogen sulfate, 99%

IL-0060-HP [262297-13-2] C<sub>8</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub>S MW 236.29



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 3088 cP    σ (25 °C): ~ mS/cm    ρ (30 °C): 1.28 g/cm<sup>3</sup>

## 1-Ethyl-3-methylimidazolium dibutylphosphate, 97%

IL-0323-HP [869858-84-4] C<sub>14</sub>H<sub>29</sub>N<sub>2</sub>O<sub>4</sub>P MW 320.36

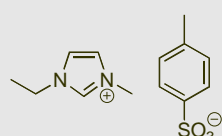


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 691 cP    σ (25 °C): 0.25 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Ethyl-3-methylimidazolium tosylate, 99%

IL-0008-HP [328090-25-1] C<sub>13</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub>S MW 282.36

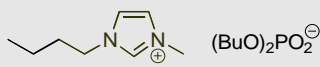


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 54 °C    η (20 °C): 5214 cP    σ (20 °C): 0.19 mS/cm    ρ (20 °C): 1.23 g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium dibutylphosphate, 97%

IL-0324-HP [663199-28-8] C<sub>16</sub>H<sub>33</sub>N<sub>2</sub>O<sub>4</sub>P MW 348.42

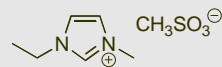


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 1539 cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Ethyl-3-methylimidazolium methanesulfonate, 99%

IL-0004-HP [145022-45-3] C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub>S MW 206.26



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 135 cP    σ (30 °C): 3.69 mS/cm    ρ (23 °C): 1.24 g/cm<sup>3</sup>

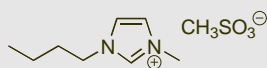
# IMIDAZOLIUM-BASED SULFATES, SULFONATES, PHOSPHATES

Products 2017



## 1-Butyl-3-methylimidazolium methanesulfonate, 98%

IL-0061-HP [342789-81-5]  $C_9H_{18}N_2O_3S$  MW 234.32



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 73 °C     $\eta$  (25 °C): ~ cP     $\sigma$  (25 °C): ~ mS/cm     $\rho$  (25 °C): ~ g/cm<sup>3</sup>



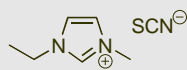
# IMIDAZOLIUM-BASED THIOCYANATES, DICYANAMIDES

Products 2017



## 1-Ethyl-3-methylimidazolium thiocyanate, >98%

IL-0007-HP [331717-63-6] C<sub>7</sub>H<sub>11</sub>N<sub>3</sub>S MW 169.25

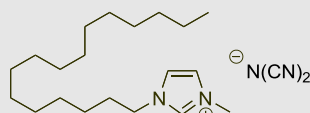


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -6 °C η (20 °C): 24.7 cP σ (20 °C): 17.8 mS/cm ρ (25 °C): 1.12 g/cm<sup>3</sup>

## 1-Hexadecyl-3-methylimidazolium dicyanamide, >98%

IL-0336-HP [---] C<sub>22</sub>H<sub>39</sub>N<sub>5</sub> MW 373.32

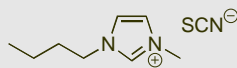


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium thiocyanate, >98%

IL-0063-HP [344790-87-0] C<sub>9</sub>H<sub>15</sub>N<sub>3</sub>S MW 197.30

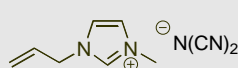


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 35.9 cP σ (30 °C): 8.98 mS/cm ρ (30 °C): 1.07 g/cm<sup>3</sup>

## 1-Allyl-3-methylimidazolium dicyanamide, >98%

IL-0240-HP [917956-73-1] C<sub>9</sub>H<sub>11</sub>N<sub>5</sub> MW 189.22

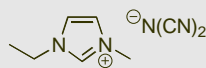


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 17.6 cP σ (30 °C): 17.0 mS/cm ρ (24 °C): 1.11 g/cm<sup>3</sup>

## 1-Ethyl-3-methylimidazolium dicyanamide, >98%

IL-0003-HP [370865-89-7] C<sub>8</sub>H<sub>11</sub>N<sub>5</sub> MW 177.21

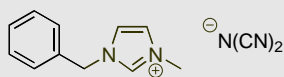


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -21 °C η (25 °C): 14.6 cP σ (30 °C): 17.7 mS/cm ρ (26 °C): 1.10 g/cm<sup>3</sup>

## 1-Benzyl-3-methylimidazolium dicyanamide, >98%

IL-0242-HP [958445-60-8] C<sub>13</sub>H<sub>13</sub>N<sub>5</sub> MW 239.28

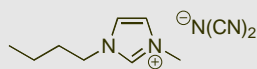


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 78.5 cP σ (30 °C): 2.95 mS/cm ρ (24 °C): 1.16 g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium dicyanamide, >98%

IL-0010-HP [448245-52-1] C<sub>10</sub>H<sub>15</sub>N<sub>5</sub> MW 205.26



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (20 °C): 33.4 cP σ (20 °C): 9.54 mS/cm ρ (30 °C): 1.06 g/cm<sup>3</sup>

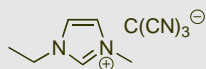
# IMIDAZOLIUM-BASED TRICYANOMETHANIDES

Products 2017



## 1-Ethyl-3-methylimidazolium tricyanomethanide, 98%

IL-0316-HP [666823-18-3]  $C_{10}H_{11}N_5$  MW 201.23

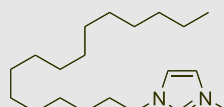


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 14.3 cP  $\sigma$  (30 °C): 21.3 mS/cm  $\rho$  (24 °C): 1.08 g/cm<sup>3</sup>

## 1-Hexadecyl-3-methylimidazolium tricyanomethanide, >98%

IL-0337-HP [---]  $C_{24}H_{39}N_5$  MW 397.60

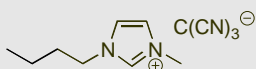


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-methylimidazolium tricyanomethanide, 98%

IL-0317-HP [878027-73-7]  $C_{12}H_{15}N_5$  MW 229.28

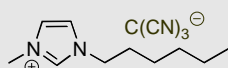


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 25.7 cP  $\sigma$  (30 °C): 8.83 mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Hexyl-3-methylimidazolium tricyanomethanide, 98%

IL-0331-HP [1365535-17-6]  $C_{14}H_{19}N_5$  MW 257.33

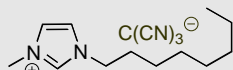


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 39.2 cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (24 °C): 1.02 g/cm<sup>3</sup>

## 1-Methyl-3-octylimidazolium tricyanomethanide, 98%

IL-0332-HP [1203710-60-4]  $C_{16}H_{23}N_5$  MW 285.39



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (24 °C): ~ g/cm<sup>3</sup>

# IMIDAZOLIUM-BASED ACETATES, TRIFLUOROACETATES, NITRATES, TETRACHLOROFERRATES, TETRATHIOCYANATOCOBALTATES

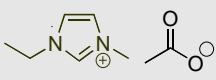
Products 2017



**1-Ethyl-3-methylimidazolium acetate, >95%**

IL-0189-TG [143314-17-4] C<sub>8</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub> MW 170.21

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

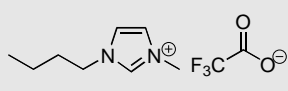


m.p.: -45 °C    η (25 °C): 93.0 cP    σ (25 °C): 2.50 mS/cm    ρ (25 °C): 1.10 g/cm<sup>3</sup>

**1-Butyl-3-methylimidazolium trifluoroacetate, >97%**

IL-0260-SG [174899-94-6] C<sub>10</sub>H<sub>15</sub>F<sub>3</sub>N<sub>2</sub>O<sub>2</sub> MW 252.11

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

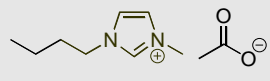


m.p.: <RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-3-methylimidazolium acetate, >98%**

IL-0315-HP [284049-75-8] C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub> MW 198.26

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

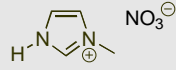


m.p.: <RT    η (25 °C): 208 cP    σ (30 °C): 1.44 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methylimidazolium nitrate, 98%**

IL-0264-SG [156204-43-2] C<sub>4</sub>H<sub>7</sub>N<sub>3</sub>O<sub>3</sub> MW 145.12

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

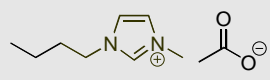


m.p.: 66 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-3-methylimidazolium acetate, >95%**

IL-0315-TG [284049-75-8] C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub> MW 198.26

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

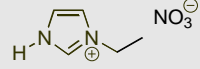


m.p.: <RT    η (25 °C): 208 cP    σ (30 °C): 1.44 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethylimidazolium nitrate, 98%**

IL-0272-SG [501693-38-5] C<sub>5</sub>H<sub>9</sub>N<sub>3</sub>O<sub>3</sub> MW 159.14

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

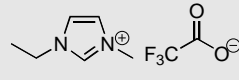


m.p.: <RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium trifluoroacetate, >97%**

IL-0027-SG [174899-65-1] C<sub>8</sub>H<sub>11</sub>F<sub>3</sub>N<sub>2</sub>O<sub>2</sub> MW 224.18

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

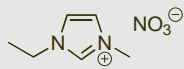


m.p.: -14 °C    η (25 °C): 28.7 cP    σ (25 °C): ~ mS/cm    ρ (25 °C): 1.31 g/cm<sup>3</sup>

**1-Ethyl-3-methylimidazolium nitrate, >98%**

IL-0005-HP [143314-14-1] C<sub>6</sub>H<sub>11</sub>N<sub>3</sub>O<sub>3</sub> MW 173.17

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

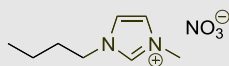


m.p.: 38 °C    η (45 °C): 21.3 cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**IMIDAZOLIUM-BASED ACETATES,  
TRIFLUOROACETATES, NITRATES, TETRACHLOROFERRATES,  
TETRATHIOCYANATOCOBALTATES**  
Products 2017

**1-Butyl-3-methylimidazolium  
nitrate, >98%**

IL-0201-HP [179075-88-8]  $C_8H_{15}N_3O_3$  MW 201.22

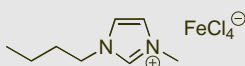


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 35 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): 1.16 g/cm<sup>3</sup>

**1-Butyl-3-methylimidazolium  
tetrachloroferrate(III), >97%**

IL-0047-SG [359845-21-9]  $C_8H_{15}Cl_4FeN_2$  MW 336.87

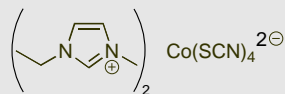


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 43.4 cP  $\sigma$  (25 °C): 4.37 mS/cm  $\rho$  (25 °C): 1.37 g/cm<sup>3</sup>

**Bis(1-ethyl-3-methylimidazolium)  
tetrathiocyanatocobaltate, >99%**

IL-0309-HP [1255925-80-4]  $C_{16}H_{22}CoN_8S_4$  MW 513.59

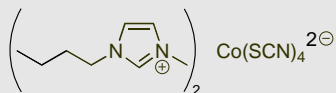


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 123 cP  $\sigma$  (30 °C): 5.34 mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**Bis(1-butyl-3-methylimidazolium)  
tetrathiocyanatocobaltate, >99%**

IL-0310-HP [1245942-47-5]  $C_{20}H_{30}CoN_8S_4$  MW 569.70



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): ~ cP  $\sigma$  (30 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

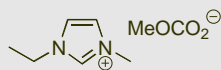
# IMIDAZOLIUM-BASED METHYLCARBONATES

Products 2017



## 1-Ethyl-3-methylimidazolium methylcarbonate, >97%, ~30% in MeOH

IN-0027-SG [251102-26-7] C<sub>8</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub> MW 186.10

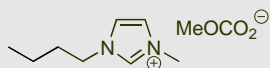


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

Produced by BASF.

## 1-Butyl-3-methylimidazolium methylcarbonate, >97%, ~30% in MeOH

IN-0028-SG [916850-37-8] C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub> MW 214.13



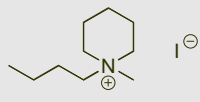
25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

Produced by BASF.

# PIPERIDINIUM-BASED IONIC LIQUIDS



## Products 2017

<p><b>1-Butyl-1-methylpiperidinium bis(trifluoromethylsulfonyl)imide, 99%</b></p> <p>IL-0154-HP [623580-02-9] C<sub>12</sub>H<sub>22</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 436.44</p> <p>25 g 50 g 100 g 250 g 500 g 1 kg 5 kg</p>  <p>m.p.: &lt;RT η (25 °C): 173 cP σ (25 °C): 0.84 mS/cm ρ (23 °C): 1.38 g/cm<sup>3</sup></p>	<p><b>1-Butyl-1-methylpiperidinium iodide, &gt;98%</b></p> <p>IL-0169-HP [37971-78-1] C<sub>10</sub>H<sub>22</sub>IN MW 283.19</p> <p>25 g 50 g 100 g 250 g 500 g 1 kg 5 kg</p>  <p>m.p.: 192 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup></p>
<p><b>1-Butyl-1-methylpiperidinium chloride, 99%</b></p> <p>IL-0155-HP [845790-13-8] C<sub>10</sub>H<sub>22</sub>ClN MW 191.74</p> <p>25 g 50 g 100 g 250 g 500 g 1 kg 5 kg</p>  <p>m.p.: &gt;230 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup></p>	<p><b>1-Butyl-1-methylpiperidinium tetrafluoroborate, 99%</b></p> <p>IL-0152-HP [886439-34-5] C<sub>10</sub>H<sub>22</sub>BF<sub>4</sub>N MW 243.09</p> <p>25 g 50 g 100 g 250 g 500 g 1 kg 5 kg</p>  <p>m.p.: 149 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup></p>
<p><b>1-Butyl-1-methylpiperidinium bromide, 99%</b></p> <p>IL-0153-HP [94280-72-5] C<sub>10</sub>H<sub>22</sub>BrN MW 236.19</p> <p>25 g 50 g 100 g 250 g 500 g 1 kg 5 kg</p>  <p>m.p.: 231 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup></p>	<p><b>1-Butyl-1-methylpiperidinium trifluoromethanesulfonate, 99%</b></p> <p>IL-0174-HP [1357500-93-6] C<sub>11</sub>H<sub>22</sub>F<sub>3</sub>NO<sub>3</sub>S MW 305.36</p> <p>25 g 50 g 100 g 250 g 500 g 1 kg 5 kg</p>  <p>m.p.: 38 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup></p>
<p><b>1-Butyl-1-methylpiperidinium hexafluorophosphate, 99%</b></p> <p>IL-0156-HP [1257647-66-7] C<sub>10</sub>H<sub>22</sub>F<sub>6</sub>NP MW 301.25</p> <p>25 g 50 g 100 g 250 g 500 g 1 kg 5 kg</p>  <p>m.p.: 81 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup></p>	<p><b>1-Methyl-1-propylpiperidinium bis(trifluoromethylsulfonyl)imide, 99%</b></p> <p>IL-0045-HP [608140-12-1] C<sub>11</sub>H<sub>20</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 422.41</p> <p>25 g 50 g 100 g 250 g 500 g 1 kg 5 kg</p>  <p>m.p.: &lt;RT η (25 °C): 176 cP σ (30 °C): 2.12 mS/cm ρ (23 °C): 1.41 g/cm<sup>3</sup></p>

# PIPERIDINIUM-BASED IONIC LIQUIDS

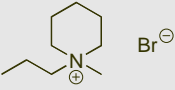


## Products 2017

**1-Methyl-1-propylpiperidinium bromide, 99%**

IL-0090-HP [88840-42-0] C<sub>9</sub>H<sub>20</sub>BrN MW 222.17

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

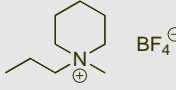


m.p.: 247 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-1-propylpiperidinium tetrafluoroborate, 99%**

IL-0150-HP [879866-95-2] C<sub>9</sub>H<sub>20</sub>BF<sub>4</sub>N MW 229.07

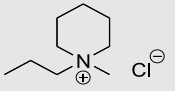
25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



**1-Methyl-1-propylpiperidinium chloride, >98%**

IL-0151-HP [1383436-85-8] C<sub>9</sub>H<sub>20</sub>ClN MW 177.71

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

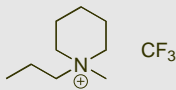


m.p.: >280 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-1-propylpiperidinium trifluoromethanesulfonate, 99%**

IL-0175-HP [---] C<sub>10</sub>H<sub>20</sub>F<sub>3</sub>NO<sub>3</sub>S MW 291.33

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

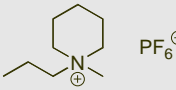


m.p.: 71 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-1-propylpiperidinium hexafluorophosphate, 99%**

IL-0149-HP [1426821-81-9] C<sub>9</sub>H<sub>20</sub>F<sub>6</sub>NP MW 287.23

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

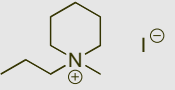


m.p.: 98 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-1-propylpiperidinium iodide, >98%**

IL-0170-HP [17874-63-4] C<sub>9</sub>H<sub>20</sub>IN MW 269.17

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 190 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

# PYRIDINIUM-BASED BIS(TRIFLUOROMETHYLSULFONYL)IMIDES

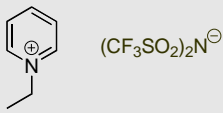
Products 2017



**1-Ethylpyridinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0211-HP [712354-97-7] C<sub>9</sub>H<sub>10</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 388.31

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

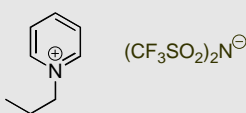
 (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>N<sup>⊖</sup>

m.p.: >RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Propylpyridinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0212-HP [1104525-90-7] C<sub>10</sub>H<sub>12</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 402.33

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

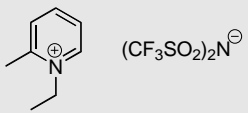
 (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>N<sup>⊖</sup>

m.p.: 46 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-2-methylpyridinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0247-HP [712354-99-9] C<sub>10</sub>H<sub>12</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 402.33

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

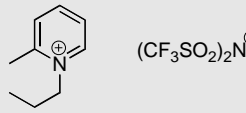
 (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>N<sup>⊖</sup>

m.p.: <RT η (25 °C): 74.8 cP σ (30 °C): 3.71 mS/cm ρ (27 °C): 1.51 g/cm<sup>3</sup>

**2-Methyl-1-propylpyridinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0248-HP [---] C<sub>11</sub>H<sub>14</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 416.36

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

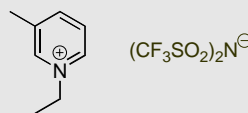
 (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>N<sup>⊖</sup>

m.p.: <RT η (25 °C): 81.6 cP σ (30 °C): 3.00 mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-3-methylpyridinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0214-HP [841251-37-4] C<sub>10</sub>H<sub>12</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 402.33

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

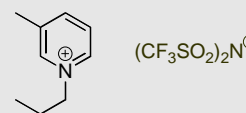
 (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>N<sup>⊖</sup>

m.p.: <RT η (25 °C): 36.6 cP σ (30 °C): 7.47 mS/cm ρ (26 °C): 1.48 g/cm<sup>3</sup>

**3-Methyl-1-propylpyridinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0215-HP [817575-06-7] C<sub>11</sub>H<sub>14</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 416.36

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg


 (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>N<sup>⊖</sup>

m.p.: <RT η (25 °C): 53.4 cP σ (30 °C): 7.47 mS/cm ρ (22 °C): 1.45 g/cm<sup>3</sup>

**1-Ethyl-4-methylpyridinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0217-HP [712355-03-8] C<sub>10</sub>H<sub>12</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 402.33

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

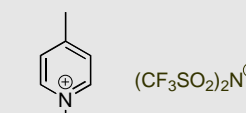
 (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>N<sup>⊖</sup>

m.p.: <RT η (25 °C): 31.8 cP σ (25 °C): 3.42 mS/cm ρ (21 °C): 1.49 g/cm<sup>3</sup>

**4-Methyl-1-propylpyridinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0218-HP [1456878-01-5] C<sub>11</sub>H<sub>14</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 416.36

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

 (CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>N<sup>⊖</sup>

m.p.: <RT η (25 °C): 51.0 cP σ (30 °C): 5.72 mS/cm ρ (22 °C): 1.45 g/cm<sup>3</sup>



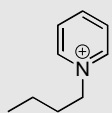
# PYRIDINIUM-BASED BIS(TRIFLUOROMETHYLSULFONYL)IMIDES

Products 2017



## 1-Butylpyridinium bis(trifluoromethylsulfonyl)imide, 99%

IL-0213-HP [187863-42-9] C<sub>11</sub>H<sub>14</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 416.36

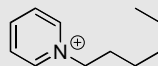


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 59.0 cP    σ (25 °C): 1.54 mS/cm    ρ (23 °C): 1.45 g/cm<sup>3</sup>

## 1-Hexylpyridinium bis(trifluoromethylsulfonyl)imide, 99%

IL-0330-HP [460983-97-5] C<sub>13</sub>H<sub>18</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 444.41

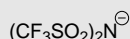
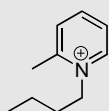


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 75.3 cP    σ (30 °C): 2.30 mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-2-methylpyridinium bis(trifluoromethylsulfonyl)imide, 99%

IL-0228-HP [384347-09-5] C<sub>12</sub>H<sub>16</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 430.39

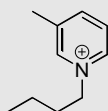


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 91.5 cP    σ (25 °C): 1.03 mS/cm    ρ (21 °C): 1.43 g/cm<sup>3</sup>

## 1-Butyl-3-methylpyridinium bis(trifluoromethylsulfonyl)imide, 99%

IL-0216-HP [344790-86-9] C<sub>12</sub>H<sub>16</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 430.39

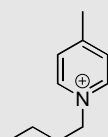


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT    η (25 °C): 51.8 cP    σ (25 °C): 2.51 mS/cm    ρ (22 °C): 1.41 g/cm<sup>3</sup>

## 1-Butyl-4-methylpyridinium bis(trifluoromethylsulfonyl)imide, 99%

IL-0219-HP [475681-62-0] C<sub>12</sub>H<sub>16</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 430.39



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 10 °C    η (25 °C): 53.8 cP    σ (30 °C): 4.32 mS/cm    ρ (22 °C): 1.41 g/cm<sup>3</sup>

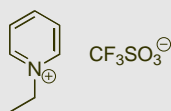
# PYRIDINIUM-BASED TRIFLATES

Products 2017



## 1-Ethylpyridinium trifluoromethanesulfonate, 99%

IL-0186-HP [3878-80-6]  $C_8H_{10}F_3NO_3S$  MW 257.23

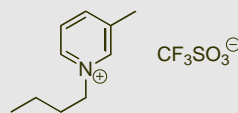


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 68.8 cP  $\sigma$  (24 °C): 4.34 mS/cm  $\rho$  (24 °C): 1.40 g/cm<sup>3</sup>

## 1-Butyl-3-methylpyridinium trifluoromethanesulfonate, 99%

IL-0179-HP [857841-32-8]  $C_{11}H_{16}F_3NO_3S$  MW 299.31

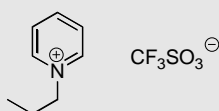


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 117 cP  $\sigma$  (30 °C): 2.35 mS/cm  $\rho$  (25 °C): 1.28 g/cm<sup>3</sup>

## 1-Propylpyridinium trifluoromethanesulfonate, 99%

IL-0250-HP [1242154-93-3]  $C_9H_{12}F_3NO_3S$  MW 271.26

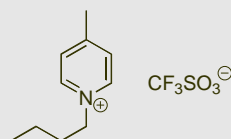


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-4-methylpyridinium trifluoromethanesulfonate, 99%

IL-0180-HP [882172-79-4]  $C_{11}H_{16}F_3NO_3S$  MW 299.31

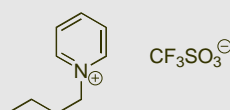


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 136 cP  $\sigma$  (30 °C): 2.41 mS/cm  $\rho$  (26 °C): 1.23 g/cm<sup>3</sup>

## 1-Butylpyridinium trifluoromethanesulfonate, 99%

IL-0182-HP [390423-43-5]  $C_{10}H_{14}F_3NO_3S$  MW 285.29

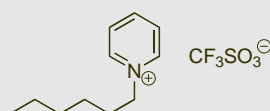


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 36 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Hexylpyridinium trifluoromethanesulfonate, 99%

IL-0181-HP [623167-81-7]  $C_{12}H_{18}F_3NO_3S$  MW 313.34

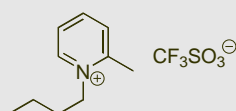


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 63 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-2-methylpyridinium trifluoromethanesulfonate, 99%

IL-0178-HP [1770850-20-8]  $C_{11}H_{16}F_3NO_3S$  MW 299.31



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 240 cP  $\sigma$  (30 °C): 1.47 mS/cm  $\rho$  (26 °C): 1.30 g/cm<sup>3</sup>

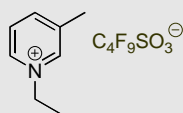
# PYRIDINIUM-BASED PERFLUOROBUTANESULFONATES/TRICYANOMETHANIDES

Products 2017



## 1-Ethyl-3-methylpyridinium perfluorobutanesulfonate, >99%

IL-0313-HP [1015420-87-7]  $C_{12}H_{12}F_9NO_3S$  MW 421.28

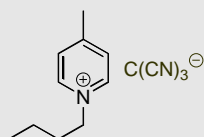


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 194 cP  $\sigma$  (30 °C): 1.52 mS/cm  $\rho$  (23 °C): 1.52 g/cm<sup>3</sup>

## 1-Butyl-4-methylpyridinium tricyanomethanide, 98%

IL-0319-HP [1312925-66-8]  $C_{14}H_{16}N_4$  MW 240.30



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 32.5 cP  $\sigma$  (30 °C): 6.99 mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

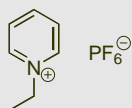
# PYRIDINIUM-BASED HEXAFLUOROPHOSPHATES

Products 2017



## 1-Ethylpyridinium hexafluorophosphate, 99%

IL-0172-HP [103173-73-5]  $C_7H_{10}F_6NP$  MW 253.13

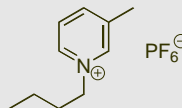


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 106 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-methylpyridinium hexafluorophosphate, 99%

IL-0080-HP [845835-03-2]  $C_{10}H_{16}F_6NP$  MW 295.21

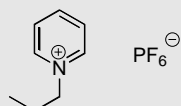


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 52 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Propylpyridinium hexafluorophosphate, 99%

IL-0251-HP [1242154-97-7]  $C_8H_{12}F_6NP$  MW 267.15

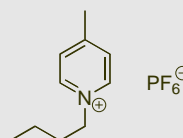


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-4-methylpyridinium hexafluorophosphate, 99%

IL-0084-HP [401788-99-6]  $C_{10}H_{16}F_6NP$  MW 295.21

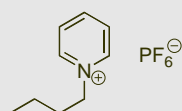


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 45-50 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butylpyridinium hexafluorophosphate, 99%

IL-0088-HP [186088-50-6]  $C_9H_{14}F_6NP$  MW 281.18

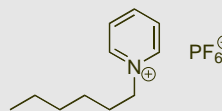


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 75-80 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Hexylpyridinium hexafluorophosphate, 99%

IL-0114-HP [797789-00-5]  $C_{11}H_{18}F_6NP$  MW 309.24

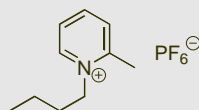


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 50 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-2-methylpyridinium hexafluorophosphate, 99%

IL-0127-HP [1268986-44-2]  $C_{10}H_{16}F_6NP$  MW 295.21



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 52-53 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

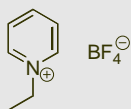
# PYRIDINIUM-BASED TETRAFLUOROBORATES

Products 2017



## 1-Ethylpyridinium tetrafluoroborate, >98%

IL-0107-HP [350-48-1]  $C_7H_{10}BF_4N$  MW 194.97

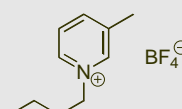


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 46 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-3-methylpyridinium tetrafluoroborate, 99%

IL-0081-HP [597581-48-1]  $C_{10}H_{16}BF_4N$  MW 237.05

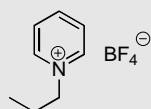


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): 176 cP  $\sigma$  (23 °C): 1.41 mS/cm  $\rho$  (25 °C): 1.18 g/cm<sup>3</sup>

## 1-Propylpyridinium tetrafluoroborate, >98%

IL-0252-HP [239084-00-5]  $C_8H_{12}BF_4N$  MW 208.99

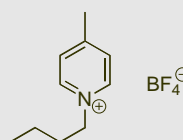


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

## 1-Butyl-4-methylpyridinium tetrafluoroborate, 99%

IL-0085-HP [343952-33-0]  $C_{10}H_{16}BF_4N$  MW 237.05

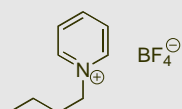


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (20 °C): 342 cP  $\sigma$  (30 °C): 3.18 mS/cm  $\rho$  (22 °C): 1.18 g/cm<sup>3</sup>

## 1-Butylpyridinium tetrafluoroborate, 99%

IL-0089-HP [203389-28-0]  $C_9H_{14}BF_4N$  MW 223.02

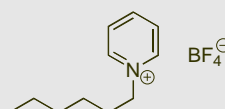


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (20 °C): 203 cP  $\sigma$  (23 °C): 1.94 mS/cm  $\rho$  (22 °C): 1.23 g/cm<sup>3</sup>

## 1-Hexylpyridinium tetrafluoroborate, 99%

IL-0108-HP [474368-70-2]  $C_{11}H_{18}NBF_4$  MW 251.07

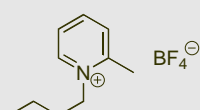


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (18 °C): 460 cP  $\sigma$  (30 °C): 0.90 mS/cm  $\rho$  (23 °C): 1.16 g/cm<sup>3</sup>

## 1-Butyl-2-methylpyridinium tetrafluoroborate, 99%

IL-0111-HP [286453-46-1]  $C_{10}H_{16}BF_4N$  MW 237.05



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT  $\eta$  (20 °C): 258 cP  $\sigma$  (23 °C): 1.83 mS/cm  $\rho$  (25 °C): 1.20 g/cm<sup>3</sup>

# PYRIDINIUM-BASED CHLORIDES

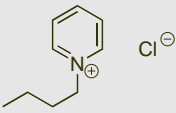
Products 2017



**1-Butylpyridinium chloride, >98%**

IL-0087-HP [1124-64-7] C<sub>9</sub>H<sub>14</sub>ClN MW 171.67

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

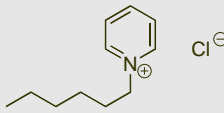


m.p.: 131 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Hexylpyridinium chloride, >98%**

IL-0131-HP [6220-15-1] C<sub>11</sub>H<sub>16</sub>ClN MW 199.73

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

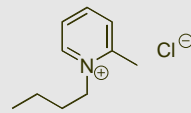


m.p.: <RT    η (25 °C): 4322 cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-2-methylpyridinium chloride, >98%**

IL-0129-HP [112400-85-8] C<sub>10</sub>H<sub>16</sub>ClN MW 185.69

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

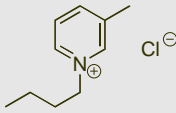


m.p.: 147 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-3-methylpyridinium chloride, >98%**

IL-0079-HP [125652-55-3] C<sub>10</sub>H<sub>16</sub>ClN MW 185.69

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

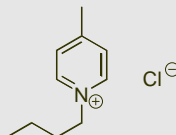


m.p.: 112 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-4-methylpyridinium chloride, >98%**

IL-0083-HP [112400-86-9] C<sub>10</sub>H<sub>16</sub>ClN MW 185.69

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 162 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

# PYRIDINIUM-BASED BROMIDES

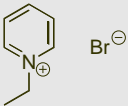
Products 2017



**1-Ethylpyridinium bromide, 99%**

IL-0171-HP [1906-79-2] C<sub>7</sub>H<sub>10</sub>BrN MW 188.07

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

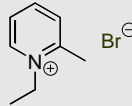


m.p.: 120 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-2-methylpyridinium bromide, >99%**

IL-0225-HP [32353-50-7] C<sub>8</sub>H<sub>12</sub>BrN MW 202.09

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

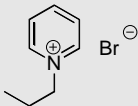


m.p.: 120 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Propylpyridinium bromide, 99%**

IL-0224-HP [873-71-2] C<sub>8</sub>H<sub>12</sub>BrN MW 202.09

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

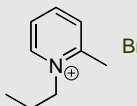


m.p.: 73 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Propyl-2-methylpyridinium bromide, >99%**

IL-0221-HP [5411-09-6] C<sub>9</sub>H<sub>14</sub>BrN MW 216.12

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

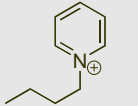


m.p.: 106 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butylpyridinium bromide, 99%**

IL-0086-HP [874-80-6] C<sub>9</sub>H<sub>14</sub>BrN MW 216.12

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

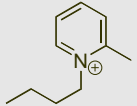


m.p.: 98 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-2-methylpyridinium bromide, 99%**

IL-0128-HP [26576-84-1] C<sub>10</sub>H<sub>16</sub>BrN MW 230.15

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

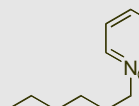


m.p.: 152 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Hexylpyridinium bromide, 99%**

IL-0130-HP [74440-81-6] C<sub>11</sub>H<sub>18</sub>BrN MW 244.17

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

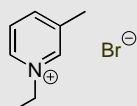


m.p.: 60-70 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-3-methylpyridinium bromide, >99%**

IL-0226-HP [54778-76-6] C<sub>8</sub>H<sub>12</sub>BrN MW 202.09

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: >RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

# PYRIDINIUM-BASED BROMIDES

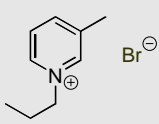
Products 2017



**1-Propyl-3-methylpyridinium bromide, >99%**

IL-0222-HP [67021-55-0] C<sub>9</sub>H<sub>14</sub>BrN MW 216.12

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

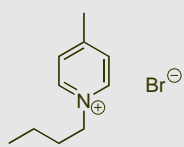


m.p.: 152 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-4-methylpyridinium bromide, 99%**

IL-0082-HP [65350-59-6] C<sub>10</sub>H<sub>16</sub>BrN MW 230.15

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

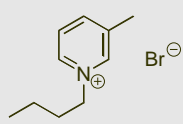


m.p.: 118 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-3-methylpyridinium bromide, 99%**

IL-0078-HP [26576-85-2] C<sub>10</sub>H<sub>16</sub>BrN MW 230.15

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

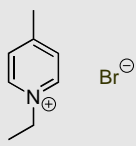


m.p.: 79 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-4-methylpyridinium bromide, >99%**

IL-0227-HP [32353-49-4] C<sub>8</sub>H<sub>12</sub>BrN MW 202.09

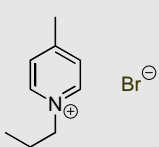
25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



**1-Propyl-4-methylpyridinium bromide, >99%**

IL-0223-HP [70850-58-7] C<sub>9</sub>H<sub>14</sub>BrN MW 216.12

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 55 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>



# PYRIDINIUM-BASED IODIDES

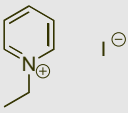
Products 2017



**1-Ethylpyridinium iodide, >98%**

IL-0173-HP [872-90-2] C<sub>7</sub>H<sub>10</sub>IN MW 235.07

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

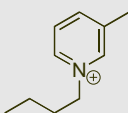


m.p.: 97 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-3-methylpyridinium iodide, >98%**

IL-0184-HP [258273-67-5] C<sub>10</sub>H<sub>16</sub>NI MW 277.15

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

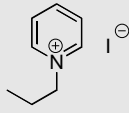


m.p.: <RT    η (25 °C): 2632 cP    σ (25 °C): ~ mS/cm    ρ (26 °C): 1.45 g/cm<sup>3</sup>

**1-Propylpyridinium iodide, >98%**

IL-0253-HP [39868-02-5] C<sub>8</sub>H<sub>12</sub>IN MW 249.09

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

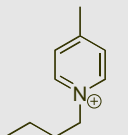


m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-4-methylpyridinium iodide, >98%**

IL-0185-HP [32353-64-3] C<sub>10</sub>H<sub>16</sub>NI MW 277.15

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

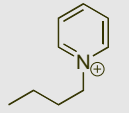


m.p.: 60 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butylpyridinium iodide, >98%**

IL-0176-HP [874-81-7] C<sub>9</sub>H<sub>14</sub>IN MW 263.12

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

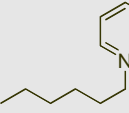


m.p.: 74 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Hexylpyridinium iodide, >98%**

IL-0177-HP [7324-00-7] C<sub>11</sub>H<sub>18</sub>IN MW 291.17

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

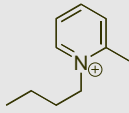


m.p.: 59 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-2-methylpyridinium iodide, >98%**

IL-0183-HP [13311-31-4] C<sub>10</sub>H<sub>16</sub>NI MW 277.15

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 114 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

# PYRROLIDINIUM-BASED IONIC LIQUIDS

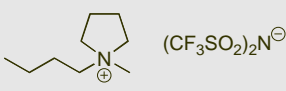


## Products 2017

**1-Butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0035-HP [223437-11-4]  $C_{11}H_{20}F_6N_2O_4S_2$  MW 422.41

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

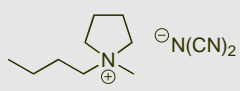


m.p.: -18 °C  $\eta$  (25 °C): 72.1 cP  $\sigma$  (30 °C): 2.12 mS/cm  $\rho$  (23 °C): 1.40 g/cm<sup>3</sup>

**1-Butyl-1-methylpyrrolidinium dicyanamide, >98%**

IL-0041-HP [370865-80-8]  $C_{11}H_{20}N_4$  MW 208.30

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

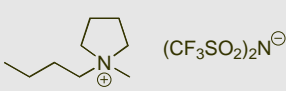


m.p.: <RT  $\eta$  (25 °C): 35.2 cP  $\sigma$  (30 °C): 10.8 mS/cm  $\rho$  (20 °C): 1.02 g/cm<sup>3</sup>

**1-Butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide, 99.5%**

IL-0035-UP [223437-11-4]  $C_{11}H_{20}F_6N_2O_4S_2$  MW 422.41

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

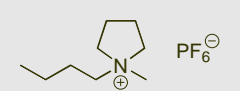


m.p.: -18 °C  $\eta$  (25 °C): 72.1 cP  $\sigma$  (30 °C): 2.12 mS/cm  $\rho$  (23 °C): 1.40 g/cm<sup>3</sup>

**1-Butyl-1-methylpyrrolidinium hexafluorophosphate, 99%**

IL-0076-HP [330671-29-9]  $C_9H_{20}F_6NP$  MW 287.23

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

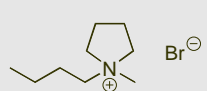


m.p.: 87 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-1-methylpyrrolidinium bromide, 99%**

IL-0074-HP [93457-69-3]  $C_9H_{20}BrN$  MW 222.17

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

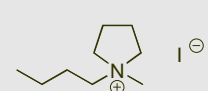


m.p.: 216 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-1-methylpyrrolidinium iodide, >98%**

IL-0050-HP [56511-17-2]  $C_9H_{20}IN$  MW 269.17

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

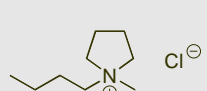


m.p.: 189 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-1-methylpyrrolidinium chloride, 99%**

IL-0075-HP [479500-35-1]  $C_9H_{20}ClN$  MW 177.72

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

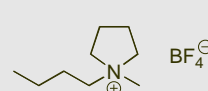


m.p.: 198 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-1-methylpyrrolidinium tetrafluoroborate, 99%**

IL-0077-HP [345984-11-4]  $C_9H_{20}BF_4N$  MW 229.07

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 155 °C  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

# PYRROLIDINIUM-BASED IONIC LIQUIDS

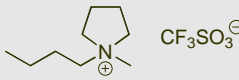


## Products 2017

**1-Butyl-1-methylpyrrolidinium trifluoromethanesulfonate, 99%**

IL-0113-HP [367522-96-1] C<sub>10</sub>H<sub>20</sub>F<sub>3</sub>NO<sub>3</sub>S MW 291.33

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

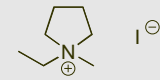


m.p.: <RT η (25 °C): 148 cP σ (24 °C): 1.85 mS/cm ρ (27 °C): 1.26 g/cm<sup>3</sup>

**1-Ethyl-1-methylpyrrolidinium iodide, >98%**

IL-0164-HP [4186-68-9] C<sub>7</sub>H<sub>16</sub>IN MW 241.11

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

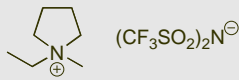


m.p.: >300 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0167-HP [223436-99-5] C<sub>9</sub>H<sub>16</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 394.36

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

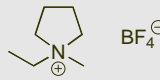


m.p.: 91 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-1-methylpyrrolidinium tetrafluoroborate, >98%**

IL-0165-HP [117947-85-0] C<sub>7</sub>H<sub>16</sub>BF<sub>4</sub>N MW 201.01

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

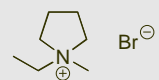


m.p.: 292 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-1-methylpyrrolidinium bromide, 99%**

IL-0163-HP [69227-51-6] C<sub>7</sub>H<sub>16</sub>BrN MW 194.11

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

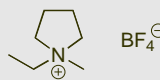


m.p.: >260 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-1-methylpyrrolidinium tetrafluoroborate, >99%**

IL-0165-UP [117947-85-0] C<sub>7</sub>H<sub>16</sub>BF<sub>4</sub>N MW 201.01

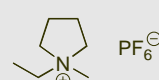
25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



**1-Ethyl-1-methylpyrrolidinium hexafluorophosphate, 99%**

IL-0166-HP [121057-90-7] C<sub>7</sub>H<sub>16</sub>F<sub>6</sub>NP MW 259.17

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

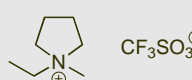


m.p.: >270 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Ethyl-1-methylpyrrolidinium trifluoromethanesulfonate, 99%**

IL-0168-HP [893443-18-0] C<sub>8</sub>H<sub>16</sub>F<sub>3</sub>NO<sub>3</sub>S MW 263.28

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 107 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

# PYRROLIDINIUM-BASED IONIC LIQUIDS

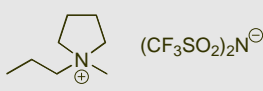


## Products 2017

**1-Methyl-1-propylpyrrolidinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0044-HP [223437-05-6] C<sub>10</sub>H<sub>18</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 408.38

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

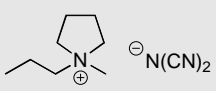


m.p.: <RT    η (25 °C): 58.7 cP    σ (30 °C): 4.92 mS/cm    ρ (29 °C): 1.43 g/cm<sup>3</sup>

**1-Methyl-1-propylpyrrolidinium dicyanamide, >98%**

IL-0249-HP [327022-60-6] C<sub>10</sub>H<sub>18</sub>N<sub>4</sub> MW 194.28

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

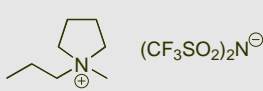


m.p.: <RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-1-propylpyrrolidinium bis(trifluoromethylsulfonyl)imide, 99.5%**

IL-0044-UP [223437-05-6] C<sub>10</sub>H<sub>18</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 408.38

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

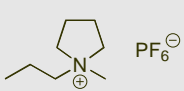


m.p.: <RT    η (25 °C): 58.7 cP    σ (30 °C): 4.92 mS/cm    ρ (29 °C): 1.43 g/cm<sup>3</sup>

**1-Methyl-1-propylpyrrolidinium hexafluorophosphate, 99%**

IL-0148-HP [327022-58-2] C<sub>8</sub>H<sub>18</sub>F<sub>6</sub>NP MW 273.20

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

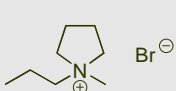


m.p.: 112 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-1-propylpyrrolidinium bromide, 99%**

IL-0145-HP [608140-09-6] C<sub>8</sub>H<sub>18</sub>BrN MW 208.14

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

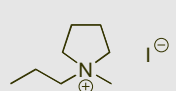


m.p.: 210 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-1-propylpyrrolidinium iodide, >98%**

IL-0161-HP [56511-19-4] C<sub>8</sub>H<sub>18</sub>IN MW 255.14

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

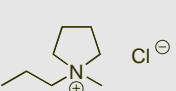


m.p.: 120 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-1-propylpyrrolidinium chloride, >98%**

IL-0146-HP [528818-82-8] C<sub>8</sub>H<sub>18</sub>ClN MW 163.69

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

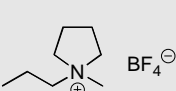


m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-1-propylpyrrolidinium tetrafluoroborate, >98%**

IL-0147-HP [327022-59-3] C<sub>8</sub>H<sub>18</sub>BF<sub>4</sub>N MW 215.04

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 55 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

# PYRROLIDINIUM-BASED IONIC LIQUIDS

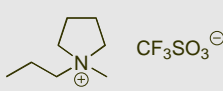


## Products 2017

**1-Methyl-1-propylpyrrolidinium trifluoromethanesulfonate, 99%**

IL-0162-HP [1224852-54-3] C<sub>9</sub>H<sub>18</sub>F<sub>3</sub>NO<sub>3</sub>S MW 277.31

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

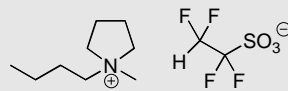


m.p.: 76 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-1-methylpyrrolidinium 1,1,2,2-tetrafluoroethanesulfonate, 99%**

IL-0235-HP [---] C<sub>11</sub>H<sub>21</sub>F<sub>4</sub>NO<sub>3</sub>S MW 323.35

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

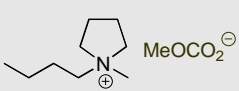


m.p.: 40 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-1-methylpyrrolidinium methylcarbonate, >97%, ~50% in MeOH**

IN-0029-SG [---] C<sub>11</sub>H<sub>23</sub>NO<sub>3</sub> MW 217.17

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

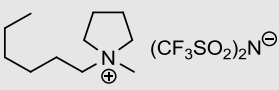


Produced by Proionic GmbH.

**1-Hexyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0092-HP [380497-19-8] C<sub>13</sub>H<sub>24</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 450.46

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

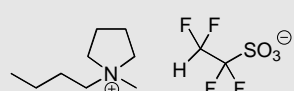


m.p.: <RT    η (25 °C): 108 cP    σ (30 °C): 1.48 mS/cm    ρ (25 °C): 1.34 g/cm<sup>3</sup>

**1-Butyl-1-methylpyrrolidinium 1,1,2,2-tetrafluoroethanesulfonate, >98%**

IL-0235-SG [---] C<sub>11</sub>H<sub>21</sub>F<sub>4</sub>NO<sub>3</sub>S MW 323.35

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

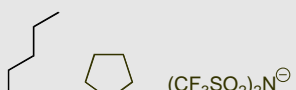


m.p.: 40 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Methyl-1-octylpyrrolidinium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0121-HP [927021-43-0] C<sub>15</sub>H<sub>28</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 478.52

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

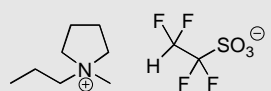


m.p.: <RT    η (20 °C): 168 cP    σ (30 °C): 1.27 mS/cm    ρ (25 °C): 1.45 g/cm<sup>3</sup>

**1-Methyl-1-propylpyrrolidinium 1,1,2,2-tetrafluoroethanesulfonate, >98%**

IL-0236-SG [---] C<sub>10</sub>H<sub>19</sub>F<sub>4</sub>NO<sub>3</sub>S MW 309.32

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

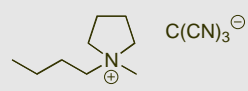


m.p.: >RT    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**1-Butyl-1-methylpyrrolidinium tricyanomethanide, 98%**

IL-0318-HP [878027-72-6] C<sub>13</sub>H<sub>20</sub>N<sub>4</sub> MW 232.32

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: <RT    η (25 °C): 26.9 cP    σ (30 °C): 7.74 mS/cm    ρ (22 °C): 101 g/cm<sup>3</sup>

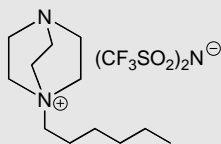
## DABCO-BASED IONIC LIQUIDS



Products 2017

### 1-Hexyl-1,4-diaza[2.2.2]bicyclooctanium bis(trifluoromethylsulfonyl)imide, >99%

IL-0314-HP [898256-50-3]  $C_{14}H_{25}F_6N_3O_4S_2$  MW 477.49



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: >RT  $\eta$  (25 °C): ~ cP  $\sigma$  (25 °C): ~ mS/cm  $\rho$  (25 °C): ~ g/cm<sup>3</sup>

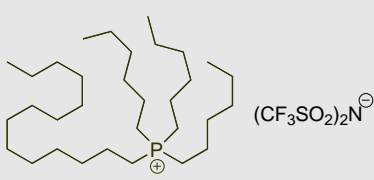
# PHOSPHONIUM-BASED IONIC LIQUIDS



## Products 2017

**Trihexyltetradecylphosphonium bis(trifluoromethylsulfonyl)imide, >98%**

IN-0021-HP [460092-03-9] C<sub>34</sub>H<sub>68</sub>F<sub>6</sub>NO<sub>4</sub>PS<sub>2</sub> MW 763.24

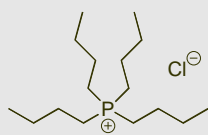


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: -72 °C η (25 °C): 304 cP σ (30 °C): 0.14 mS/cm ρ (25 °C): 1.07 g/cm<sup>3</sup>

**Tetrabutylphosphonium chloride, >95%**

IN-0015-TG [2304-30-5] C<sub>16</sub>H<sub>36</sub>ClP MW 294.88

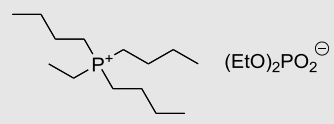


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 70-72 °C η (25 °C): ~ cP σ (30 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**Ethyltributylphosphonium diethyl phosphate, >95%**

IN-0018-TG [20445-94-7] C<sub>18</sub>H<sub>42</sub>O<sub>4</sub>P<sub>2</sub> MW 384.47

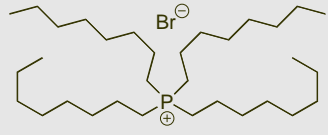


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 481 cP σ (30 °C): 0.27 mS/cm ρ (25 °C): 1.01 g/cm<sup>3</sup>

**Tetraoctylphosphonium bromide, >95%**

IN-0016-TG [23906-97-0] C<sub>32</sub>H<sub>68</sub>BrP MW 563.76

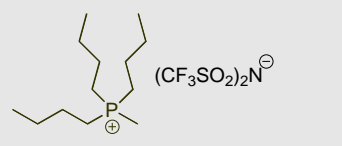


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): ~ cP σ (30 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**Tributylmethylphosphonium bis(trifluoromethylsulfonyl)imide, 99%**

IN-0037-HP [324575-10-2] C<sub>15</sub>H<sub>30</sub>F<sub>6</sub>NO<sub>4</sub>PS<sub>2</sub> MW 497.50

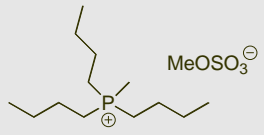


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**Tributylmethylphosphonium methyl sulfate, >95%**

IN-0013-TG [69056-62-8] C<sub>14</sub>H<sub>33</sub>O<sub>4</sub>PS MW 328.45

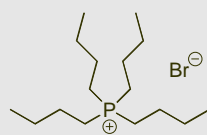


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 34 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**Tetrabutylphosphonium bromide, >95%**

IN-0014-TG [3115-68-2] C<sub>16</sub>H<sub>36</sub>BrP MW 339.34

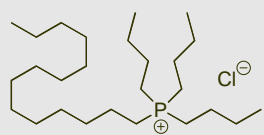


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 40 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**Tributyltetradecylphosphonium chloride, >95% (50% solution in water)**

IN-0017-SG [81741-28-8] C<sub>26</sub>H<sub>56</sub>ClP MW 435.15



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

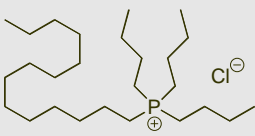
# PHOSPHONIUM-BASED IONIC LIQUIDS



## Products 2017

**Tributyltetradecylphosphonium chloride, >95%**

IN-0017-TG [81741-28-8] C<sub>26</sub>H<sub>56</sub>ClP MW 435.15

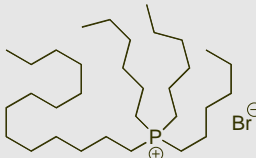


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 42-43 °C η (25 °C): ~ cP σ (25 °C): ~ mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**Trihexyltetradecylphosphonium bromide, >95%**

IN-0007-TG [654057-97-3] C<sub>32</sub>H<sub>68</sub>BrP MW 563.76

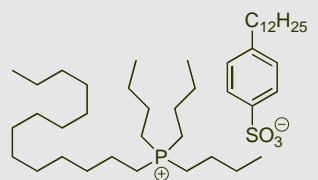


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): ~ cP σ (30 °C): ~ mS/cm ρ (23 °C): ~ g/cm<sup>3</sup>

**Tributyltetradecylphosphonium dodecylbenzenesulfonate, >95%**

IN-0019-TG [817629-57-5] C<sub>44</sub>H<sub>85</sub>O<sub>3</sub>PS MW 725.18

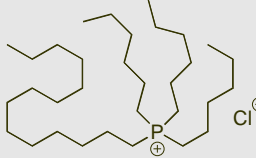


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 3621 cP σ (30 °C): 4.89 mS/cm ρ (25 °C): ~ g/cm<sup>3</sup>

**Trihexyltetradecylphosphonium chloride, >95%**

IN-0006-TG [258864-54-9] C<sub>32</sub>H<sub>68</sub>ClP MW 519.31

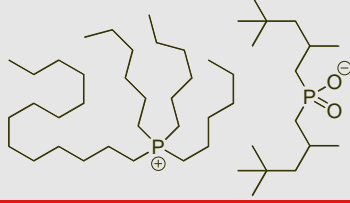


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 1631 cP σ (25 °C): 4.63 mS/cm ρ (25 °C): 0.88 g/cm<sup>3</sup>

**Trihexyltetradecylphosphonium bis(2,4,4-trimethylpentyl)phosphinate, >90%**

IN-0009-TG [465527-58-6] C<sub>48</sub>H<sub>102</sub>O<sub>2</sub>P<sub>2</sub> MW 773.27

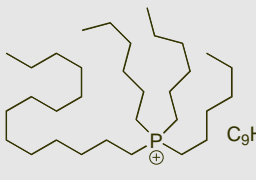


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT η (25 °C): 1198 cP σ (30 °C): 0.01 mS/cm ρ (25 °C): 0.89 g/cm<sup>3</sup>

**Trihexyltetradecylphosphonium decanoate, >95%**

IN-0008-TG [465527-65-5] C<sub>42</sub>H<sub>87</sub>O<sub>2</sub>P MW 655.11

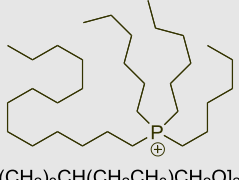


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: ~RT η (25 °C): 319 cP σ (30 °C): 0.04 mS/cm ρ (25 °C): 0.89 g/cm<sup>3</sup>

**Trihexyltetradecylphosphonium bis(2-ethylhexyl)phosphate, 98%**

IN-0036-HP [1092655-30-5] C<sub>48</sub>H<sub>102</sub>O<sub>6</sub>P<sub>2</sub> MW 837.27



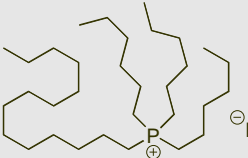
25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

[CH<sub>3</sub>(CH<sub>2</sub>)<sub>3</sub>CH(CH<sub>2</sub>CH<sub>3</sub>)CH<sub>2</sub>O]<sub>2</sub>PO<sub>2</sub><sup>⊖</sup>

m.p.: <RT η (25 °C): 1120 cP σ (30 °C): 0.002 mS/cm ρ (23 °C): 0.91 g/cm<sup>3</sup>

**Trihexyltetradecylphosphonium dicyanamide, >95%**

IN-0010-TG [701921-71-3] C<sub>34</sub>H<sub>68</sub>N<sub>3</sub>P MW 549.90



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

N(CN)<sub>2</sub><sup>⊖</sup>

m.p.: <RT η (25 °C): 361 cP σ (24 °C): 0.16 mS/cm ρ (28 °C): 0.90 g/cm<sup>3</sup>



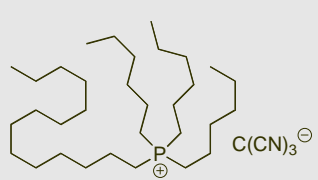
# PHOSPHONIUM-BASED IONIC LIQUIDS



## Products 2017

**Trihexyltetradecylphosphonium tricyanomethanide, 98%**

IN-0038-HP    [---]     $C_{36}H_{68}N_3P$     MW 573.92

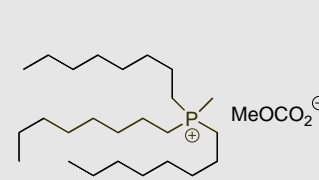


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT     $\eta$  (25 °C): ~ cP     $\sigma$  (25 °C): ~ mS/cm     $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**Trioctylmethylphosphonium methylcarbonate, >97%, ~50% in MeOH**

IN-0031-SG    [---]     $C_{27}H_{57}O_3P$     MW 460.40

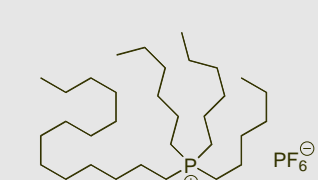


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

Produced by Proionic GmbH.

**Trihexyltetradecylphosphonium hexafluorophosphate, >95%**

IN-0012-TG    [374683-44-0]     $C_{32}H_{68}F_6P_2$     MW 628.82

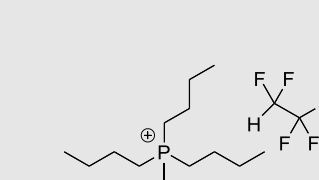


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 40-45 °C     $\eta$  (25 °C): ~ cP     $\sigma$  (25 °C): ~ mS/cm     $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**Tributylmethylphosphonium 1,1,2,2-tetrafluoroethanesulfonate, 99%**

IL-0246-HP    [---]     $C_{15}H_{21}F_4O_3PS$     MW 298.44

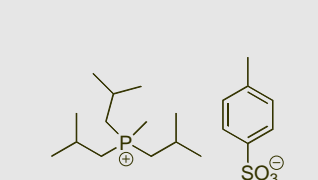


25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: 47 °C     $\eta$  (25 °C): ~ cP     $\sigma$  (25 °C): ~ mS/cm     $\rho$  (25 °C): ~ g/cm<sup>3</sup>

**Triisobutylmethylphosphonium tosylate, >95%**

IN-0011-TG    [344774-05-6]     $C_{20}H_{37}O_3PS$     MW 388.55



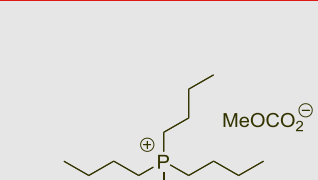
25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

m.p.: <RT     $\eta$  (25 °C): 4003 cP     $\sigma$  (25 °C): 0.04 mS/cm     $\rho$  (25 °C): 1.07 g/cm<sup>3</sup>



**Tributylmethylphosphonium methylcarbonate, >97%, ~50% in MeOH**

IN-0030-SG    [120256-45-3]     $C_{15}H_{33}O_3P$     MW 292.22



25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

Produced by Proionic GmbH.

# SULFONIUM-BASED IONIC LIQUIDS

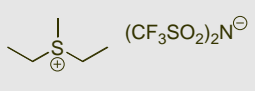


## Products and prices 2017

**Diethylmethylsulfonium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0031-HP [792188-85-3] C<sub>7</sub>H<sub>13</sub>F<sub>6</sub>NO<sub>4</sub>S<sub>3</sub> MW 385.37

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

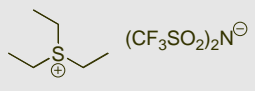


m.p.: <RT    η (25 °C): 39.4 cP    σ (25 °C): 5.98 mS/cm    ρ (19 °C): 1.51 g/cm<sup>3</sup>

**Triethylsulfonium bis(trifluoromethylsulfonyl)imide, 99%**

IL-0030-HP [321746-49-0] C<sub>8</sub>H<sub>15</sub>F<sub>6</sub>NO<sub>4</sub>S<sub>3</sub> MW 399.39

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

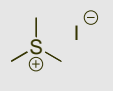


m.p.: <RT    η (25 °C): 31.5 cP    σ (25 °C): 5.12 mS/cm    ρ (24 °C): 1.46 g/cm<sup>3</sup>

**Trimethylsulfonium iodide, >98%**

IL-0259-HP [2181-42-2] C<sub>3</sub>H<sub>9</sub>IS MW 204.07

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg

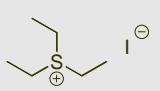


m.p.: 212 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

**Triethylsulfonium iodide, >98%**

IL-0258-HP [1829-92-1] C<sub>6</sub>H<sub>15</sub>IS MW 245.99

25 g  
50 g  
100 g  
250 g  
500 g  
1 kg  
5 kg



m.p.: 142 °C    η (25 °C): ~ cP    σ (25 °C): ~ mS/cm    ρ (25 °C): ~ g/cm<sup>3</sup>

## Products 2017

<b>IoLiLyte® SP-361</b> <b>0,1M I<sub>3</sub><sup>-</sup> Imidazolium-based Electrolyte</b>	
ES-001-HP	
	25 g
1-Methyl-3-propylimidazolium iodide	50 g
Iodine	100 g
N-Methylbenzimidazole	250 g
3-Methoxyvaleronitril	500 g
	1 kg
	5 kg

<b>IoLiLyte® SP-237</b> <b>0,2M I<sub>3</sub><sup>-</sup> PMIM/EMIM-based Electrolyte</b>	
ES-005-HP	
	25 g
1-Methyl-3-propylimidazolium iodide	50 g
1-Ethyl-3-methylimidazolium thiocyanate	100 g
Iodine	250 g
N-Methylbenzimidazole	500 g
Guanidinthiocyanate	1 kg
	5 kg

<b>IoLiLyte® SP-382</b> <b>0,15M I<sub>3</sub><sup>-</sup> Imidazolium-based Electrolyte</b>	
ES-002-HP	
	25 g
1-Methyl-3-propylimidazolium iodide	50 g
Iodine	100 g
Guanidine thiocyanate	250 g
N-Methylbenzimidazole	500 g
3-Methoxyvaleronitril	1 kg
	5 kg

<b>IoLiLyte® SP-196</b> <b>0,2M I<sub>3</sub><sup>-</sup> DIMIM/EMIM-based Electrolyte</b>	
ES-007-HP	
	25 g
1,3-Dimethylimidazolium iodide	50 g
1-Ethyl-3-methylimidazolium iodide	100 g
1-Ethyl-3-methylimidazolium thiocyanate	250 g
Iodine	500 g
N-Methylbenzimidazole	1 kg
Guanidinthiocyanate	5 kg

<b>IoLiLyte® SP-355</b> <b>0,1M I<sub>3</sub><sup>-</sup> Imidazolium-based Electrolyte</b>	
ES-003-HP	
	25 g
1,2-Dimethyl-3-propylimidazolium iodide	50 g
Iodine	100 g
N-Methylbenzimidazole	250 g
3-Methoxyvaleronitril	500 g
	1 kg
	5 kg

<b>IoLiLyte® SP-163</b> <b>0,03M I<sub>3</sub><sup>-</sup> BMIM-based Electrolyte</b>		
ES-004-HP		
	25 g	230.00 €
1-Butyl-3-methylimidazolium iodide	50 g	435.00 €
Iodine	100 g	825.00 €
tert.-Butylpyridine	250 g	on request
Guanidin Thiocyanate	500 g	on request
Acetonitril/Varelonitril	1 kg	on request
	5 kg	on request

# GENERAL TERMS AND CONDITIONS

## Products 2017



### I. General

These General Conditions of Sale and Delivery shall be an integral part of the contract of purchase. Conflicting or deviating conditions of purchase or other reservations made by the Buyer shall not be effective unless the Seller has expressly accepted them in writing for a particular order.

### II. Offers, Orders

1. The Seller's offers shall not be binding with respect to price, quantity, delivery time and availability. 2. The Buyer's orders shall become binding on the Seller upon receipt by the Buyer of the Seller's written order acknowledgment (or invoice or delivery note).

### III. Invoicing

1. The prices invoiced shall be the Seller's prices effective at the time of delivery plus statutory sales tax.

2. Should the Seller, in the interval between conclusion of the contract and delivery, effect a general price increase, the Buyer shall have the right to withdraw from the contract within two weeks of having been informed thereof, unless the price increase is exclusively due to an increase in freight rates. The right of withdrawal shall not apply to long-term supply contracts (contracts for the performance of a continuing obligation).

3. The weight of the goods on which the invoiced amount is to be calculated shall be ascertained in the dispatch department of the Seller's plant from which the goods are supplied unless the Buyer wishes them to be weighed, at his expense, by the railway authorities at the station of dispatch.

### IV. Payment

1. The handing in of bills of exchange shall be subject to the Seller's prior consent and shall not constitute payment. The maturity of bills shall not exceed 90 days from the invoice date. Discount expenses, bill charges, bill tax and similar expenses incurred in the period beginning 30 days after the invoice date shall be for the Buyer's account.

2. Where the Seller has reason to doubt the Buyer's solvency or credit worthiness and the Buyer is not prepared to effect advance cash payment or provide the Seller with security as requested, the Seller shall have the right to cancel that portion of the contract which he has not yet performed.

3. Deposits and advance payments shall be made inclusive of sales tax.

4. Payment shall not be deemed to have been effected until the amount has been cleared into one of the Seller's accounts.

5. The Seller reserves the right to use payments for the settlement of the invoices which have been outstanding longest, plus any interest on arrears and costs accrued thereon, in the following order: costs, interest, principal claim.

6. The Buyer shall not have the right to withhold payments. Counterclaims may only be offset if they are uncontested or have become res judicata.

### V. Delivery

1. The Seller shall make every effort to effect delivery as early as possible. There shall be no fixed periods for delivery.

2. Should, notwithstanding the preceding paragraph, a fixed period for delivery have been agreed, and should the Seller default with the supply, the Buyer shall grant the Seller a reasonable respite, normally of four weeks.

3. Delivery shall be subject to punctual delivery of the appropriate goods by the Seller's own suppliers.

4. The day of delivery shall be the day on which the goods leave the Seller's plant or warehouse or, if that day cannot be ascertained, the day on which the goods are put at the Buyer's disposal.

5. The provision of packaging including tankers and tank containers by the Seller shall be subject to special conditions.

### VI. Force Majeure, Impediments to Performance

Force majeure of any kind, unforeseeable production, traffic or shipping disturbances, fire, floods, unforeseeable shortages of labor, utilities or raw materials and supplies, strikes, lockouts, acts of government, and any other hindrances beyond the control of the party obliged to perform which diminish, delay or prevent production, shipment, acceptance or use of the goods, or make it an unreasonable proposition, shall relieve the party from its obligation to supply or take delivery, as the case may be, as long as and to the extent that the hindrance prevails. If, as a result of the hindrance, supply and/or acceptance is delayed by more than eight weeks, either party shall have the right to cancel the contract. Should the Seller's suppliers fail to supply him in whole or in part, the Seller shall not be under obligation to purchase from other sources. In such cases, the Seller shall have the right to distribute the available quantities among his customers while at the same time taking into account his captive requirements.

### VII. Shipment

1. The Seller reserves the right to choose the route and the mode of transport. Any additional costs resulting from special shipping requests made by the Buyer shall be borne by the Buyer. Unless prepaid freight has been agreed, the Buyer shall also bear any increases in freight rates which become effective after the contract has been concluded, any additional costs resulting from re-routing a consignment, storage expenses, etc.

2. The risk of destruction, loss or damage shall pass to the Buyer upon dispatch of the goods or, if they are collected by the Buyer, at the time they are placed at the Buyer's disposal.

### VIII. Retention of Title

1. Title to the goods shall not pass to the Buyer until he has fulfilled all liabilities arising from his business connection with the Seller, which shall include settling accessory claims and claims for damages and honoring cheques and bills. Title to the goods shall also remain with the Seller if the Seller's claims have been included in a current account and the balance of this account has been struck and acknowledged.

2. If the Buyer defaults in his obligations to the Seller, the Seller shall have the right, without granting a respite and without cancelling the contract, to demand the return of the goods to which he retains title. Acceptance of the returned goods shall not constitute cancellation of the contract unless the Seller has expressly declared this in writing. If the Seller cancels the Contract, he shall have the right to demand appropriate compensation for having permitted the Customer to use the item for a certain period.

3. If goods to which the Seller retains title are processed into new products, the Buyer shall be deemed to be effecting such processing on behalf of the Seller without

thereby acquiring any claims on the Seller. The Seller's title shall thus extend to the products resulting from the processing. If goods to which title is retained by the Seller are processed together with, mixed with or attached to goods to which title is retained by third parties, the Seller shall acquire co-ownership of the resulting products in the ratio of the invoice value of the goods owned by him to the invoice value of the goods owned by those third parties. If the goods, as a result of such mixing or attaching become part of a principal matter of the Buyer, the Buyer, by accepting these Conditions, assigns in advance his title to the new item to the Seller.

4. The Buyer shall be under obligation to provide, on behalf of the Seller, adequate storage of the goods to which the Seller retains title, to service and repair them at his expense and to insure them at his expense against loss and damage up to an extent which may reasonably be expected of a prudent businessman. By accepting these Conditions the Buyer assigns in advance to the Seller any claims which may accrue to him under the insurance policies.

5. As long as the Buyer duly meets his liabilities to the Seller, he shall have the right, in the normal course of business, to do as he wishes with the goods to which the Seller retains title. This shall not apply, however, if he and his customers have concluded an agreement according to which the Buyer must not assign his claims on them to third parties. The Buyer shall not have the right to pledge, chattel mortgage or otherwise encumber the goods to which the Seller retains title. When reselling the goods, the Buyer shall make the passing of the title subject to full payment of the goods by his customers.

6. By accepting these Conditions, the Buyer assigns in advance to the Seller any claims which may arise from a resale of the goods to which the Seller retains title, together with any incidental rights and security interests including bills of exchange and cheques, so as to provide the Seller with security for all claims he has on the Buyer as a result of the business connection. If goods to which the Seller retains title are sold together with other goods at a single price, the assignment shall be limited to the portion of the invoice value which covers the goods to which the Seller retains title. If the Buyer sells goods of which the Seller has co-ownership pursuant to clause VIII. 3., the assignment shall be limited to the portion of the invoice value which corresponds to the Seller's co-ownership. If the Buyer uses goods to which the Seller retains title for processing a third party's product on a contract basis, in accepting these Conditions he assigns in advance his contractual claim on the third party to the Seller in order to provide him with security for his claim. As long as the Buyer duly meets his liabilities to the Seller, he may collect claims from a resale or from contract processing himself. He shall not have the right to assign or pledge such claims as security.

7. If the Seller believes his claims to be at risk, the Buyer shall, at the Seller's request, inform his customers of the assignment of his claims to the Seller and supply the Seller with all necessary information and documents. Any acts of third parties aimed at seizing goods to which the Seller retains title or at appropriating claims assigned to him shall be brought to the Seller's attention by the Buyer immediately.

8. If the value of the security provided to the Seller exceeds the value of the claims to be safeguarded by more than 20 per cent, the Seller shall, at the Buyer's request, bring the excess coverage down to 20 per cent by releasing security of his own choice.

### IX. Damages

1. No claims for compensation may be lodged by the Buyer - including those of a non-contractual nature - for any minor negligent breach of duty by the Seller, his executive staff or other agents, unless such breach concerns a duty that is crucial for the object of the contract.

2. The Seller shall only be liable for indirect damage or damage which could not be foreseen at the time of conclusion of the contract if such damage is due to a gross fault on the part of the Seller or one of his managerial employees.

3. The above limitations shall not apply to damage resulting from death, injury or damage to health. However, this shall not affect the applicability of compelling statutory liability regulations such as, for example, liability for the assumption of a guarantee or product liability law.

### X. Notification of Defects

1. Notification of defects shall only be recognized if filed in writing within two weeks of receipt of the goods, together with supporting evidence, samples and packing slips, stating the invoice number and date, and the markings on the packaging.

2. Hidden defects must be notified to the Seller immediately upon discovery, but not later than five months after receipt of the goods. This shall not affect the periods of limitation. The burden of proving that a defect is a hidden defect shall rest with the Buyer.

3. Goods forming the subject of a complaint shall not be returned to the Seller except with the Seller's express consent.

### XI. Buyer's Rights in the event of Defects

1. Warranty claims made by the Buyer shall only entitle the Buyer to be supplied with a replacement. If the replacement provided by the Seller is also defective, the Buyer may reduce the purchase price or opt to cancel the contract. Claims for damages as defined in Section IX shall remain unaffected by the above. Claims made by the Buyer due to expenses incurred as a result of reworking, in particular transport, travel, labor and material costs, shall be excluded where such expenses have been increased by the fact that the item was subsequently transported to a location other than the premises of the party placing the order, unless the goods were supplied to this location in line with their intended use.

2. In the event of recourse to the guarantee by the Buyer following a successful claim against the latter on the basis of the provisions governing the purchase of a consumer good, the claims under a right of recourse in accordance with the regulations on the purchase of consumer goods shall remain unaffected. Section IX shall apply to any claim for damages.

3. The Buyer must inform the Seller without delay of any case of recourse within the supply chain. Statutory claims under a right of recourse by the Buyer against the Seller shall not apply with respect to arrangements entered into by the Buyer with its customer over and above statutory warranty claims.

4. Any guarantee agreement must be made in writing. A statement of guarantee shall only be effective if it describes the content of the guarantee and the duration and physical scope of guarantee protection in sufficient detail.

### **XII. Periods of Limitation**

In cases that fall under § 438, paragraph 1, no. 3 of the Federal Civil Code (BGB), warranty claims shall expire with effect from one year from the beginning of the statutory period of limitation. In cases that fall under § 438, paragraph 1, no. 2 of the Federal Civil Code (BGB) warranty claims shall expire with effect from two years from the beginning of the statutory period of limitation. Compelling regulations governing the statutory period of limitation or the question of liability, such as, for example, liability for the assumption of a guarantee, liability for willful intent and gross negligence, for death, physical injury or damage to health, for the violation of essential contractual obligations, liability in accordance with the product liability law and the provisions relating to the sale of consumer goods shall remain unaffected.

### **XIII. Properties of Goods, Technical Support, Use and Processing**

1. The properties of the goods shall as a general rule only include the properties as stated in the product descriptions, specifications and labeling of the Seller. Public statements, claims or advertising shall not be classed as information on the properties of the item for sale.

2. Technical advice provided by the Seller verbally, in writing or by way of trials is given in good faith but without warranty, and this shall also apply where proprietary rights of third parties are involved. The Seller's technical advice shall not release the Buyer from the obligation to test the products supplied by the Seller as to their suitability for the intended processes and uses. The application, use and processing of the products are beyond the Seller's control and therefore entirely the Buyer's responsibility.

### **XIV. Trademarks**

1. The Buyer shall not have the right to refer to the Seller's products when offering or supplying substitute products or, in price lists or similar business communications, to use the word "substitute" in conjunction with the Seller's - protected or unprotected product designations or list these designations together with any designations for substitute products.

2. When using the Seller's products for manufacturing purposes or when processing them into new products, the Buyer shall not have the right, without the Seller's prior consent, to use the Seller's product designations, especially his trademarks, on the resulting products or on the packaging therefore or in any relevant printed matter or advertising literature, particularly by mentioning the Seller's products as components of his own products. The supply of goods under a trademark shall not be deemed agreement to the use of this trademark for the products manufactured therefrom.

### **XV. Place of Performance and Jurisdiction, Invalidity of Individual Clauses**

1. Place of performance for delivery shall be the Seller's dispatch department; place of performance for payment shall be "Freiburg im Breisgau".

2. Place of jurisdiction for both parties shall be Freiburg im Breisgau. The Seller shall furthermore have the right to sue the Buyer at the Buyer's general place of jurisdiction.

3. Should any clause in these General Conditions of Sale and Delivery be or become invalid, this shall not affect the validity of the remaining clauses or remaining parts of the clause concerned. The parties shall replace any invalid arrangement by an effective one which conforms as far as possible to the economic purpose of the invalid clause.

### **Information on physical-chemical data provided in this pricelist**

All physical and chemical data provided within this pricelist are influenced by temperature, water content and purity. There might be deviations compared to literature and other sources. The data make no claim to be complete and there is no accuracy of statement.

Heilbronn, April 2017