Material Safety Data Sheet

IoLiLyte SR-355

Revision Date: 12/5/2014
Date Issued: 10/5/2017

1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product name          IoLiLyte SR-355
Product code          ES-0003
Use of the mixture    Electrolyte for dye-sensitised solar cells
Supplier              IoLiTec
                      Ionic Liquids Technologies GmbH
                      Salzstrasse 184
                      D – 74076 Heilbronn
                      Germany
Telephone             +49 (0)7131-89839-0
Fax                   +49 (0)7131-89839-109
Emergency telephone   +49 (0) 176 84850874
Email                 msds@iolitec.de

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)

Caution! Substance not yet fully tested. Risks cannot be excluded if the product is
handled inappropriately. For laboratory use only!

Classification (67/548/EEC or 1999/45/EC)

Caution! Substance not yet fully tested. Risks cannot be excluded if the product is
handled inappropriately. For laboratory use only!
2.2 Label elements
Labelling (REGULATION (EC) No 1272/2008)

Substance not yet fully tested.

Hazard statements

H-phrases

Substance not yet fully tested.

Precautionary statements

P-phrases

P262: Do not get in eyes, on skin, or on clothing
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection
P305 + P351 + P338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P313: Get medical advice/attention

Labelling (67/548/EEC or 1999/45/EC)

Substance not yet fully tested.

Risk phrases

Not fully tested substance.

Safety phrases

S: 24/25 Avoid contact with skin and eyes.
S: 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S: 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S:28,2 After contact with skin, wash immediately with plenty of water and liquid soap.
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3 COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS</th>
<th>Contents</th>
<th>Health(Class)</th>
<th>Risk(H/No.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iodine</td>
<td>7553-56-2</td>
<td>0.1 M</td>
<td></td>
<td>H400,H312,H332</td>
</tr>
<tr>
<td>N-Methylbenzimidazole</td>
<td>1632-83-3</td>
<td>0.5 M</td>
<td></td>
<td>H335,H319,H315</td>
</tr>
<tr>
<td>1,2-Dimethyl-3-propylimidazolium iodide</td>
<td>218151-78-1</td>
<td>0.6 M</td>
<td>Substance not yet fully tested!</td>
<td></td>
</tr>
<tr>
<td>3-Methoxypropanenitrile</td>
<td>110-67-8</td>
<td>~70%</td>
<td></td>
<td>H315,H319,H335</td>
</tr>
</tbody>
</table>

4 FIRST AID MEASURES

**General**
Contaminated clothing should be removed and washed before being reused.

**Inhalation**
Move the exposed person to fresh air at once. If respiratory problems, provide artificial respiration/oxygen.

**Ingestion**
Immediately rinse mouth and provide fresh air. Do not induce vomiting. Get medical attention immediately.

**Skin**
Wash the skin immediately with soap and water.

**Eyes**
Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.
# 5 FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th><strong>Extinguishing media</strong></th>
<th>Use: Water spray, fog or mist. Carbon dioxide ($\text{CO}_2$). Dry chemicals, sand, dolomite etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Special fire fighting procedures</strong></td>
<td>Avoid water in straight hose stream, will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control.</td>
</tr>
<tr>
<td><strong>Unusual fire &amp; explosion hazards</strong></td>
<td>Fire causes formation of toxic gases.</td>
</tr>
<tr>
<td><strong>Protective measures in fire</strong></td>
<td>Wear self-contained breathing apparatus as combustion may produce hazardous fumes.</td>
</tr>
</tbody>
</table>

# 6 ACCIDENTAL RELEASE MEASURES

<table>
<thead>
<tr>
<th><strong>Personal precautions during spill</strong></th>
<th>Wear protective clothing and avoid inhalation of vapor, skin or eye contact.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Precautions to protect environment</strong></td>
<td>Avoid washing into water courses. Avoid contaminating public drains or water supply.</td>
</tr>
<tr>
<td><strong>Spill cleanup methods</strong></td>
<td>Avoid contact with skin or inhalation of spillage, dust or vapor, Avoid dust formation. Collect and reclaim or dispose in sealed containers in license waste. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.</td>
</tr>
</tbody>
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7 HANDLING AND STORAGE

Usage precautions
Keep away from heat, sparks and open flame.
Do not use in confined spaces without adequate ventilation and/or respirator.

Storage precautions
Store at moderate temperatures in dry, well ventilated area.

Storage criteria
Chemical storage.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Protective equipment
Safety goggles. Chemical resident gloves.
Protective clothing.

Process control measures
Provide eyewash station and safety shower.
Use engineering controls to reduce air contamination to permissible exposure levels.

Ventilation
Provide adequate general and local exhaust ventilation.

Respirators
Use high efficiency particulate respirator with appropriate filter.

Other protection
Wear overalls and industrial shoes.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Liquid.

Color
Deeply colored.

Odor/taste
Not available.
10 STABILITY AND REACTIVITY

Stability
No particular stability concerns.

Conditions to avoid
Avoid contact to strong oxidizers, bases and acids.

Hazardous
Decomposition Products

11 TOXICOLOGICAL INFORMATION

Ingestion
Not available.

Skin
Not available.

Eyes
Not available.

Data on the toxicity of this mixture are not available. Hazardous properties cannot be excluded.

12 ECOLOGICAL INFORMATION

Environmental hazards
Avoid washing into water courses. Avoid contaminating public drains or water supply.

13 DISPOSAL CONSIDERATIONS

Disposal method
Contact specialist disposal companies. Dispose of in accordance with Local Authority
requirements. Recover and reclaim or recycle, if practical.

14 TRANSPORT INFORMATION

General
Not classified as dangerous for transport purposes.

UN No.
0

Road transport notes
Not classified as dangerous for road transport.

Rail transport notes
Not classified as dangerous for rail transport.

Sea transport notes
Not classified as dangerous for sea transport.

Air transport notes
Not classified as dangerous for air transport.

15 REGULATORY INFORMATION

Label for supply
Substance not yet fully tested.

P phrases
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Country specific information
Germany  WGK: 3  (Self-Classification)

16 OTHER INFORMATION

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