

EP-Additives for Lubricants

Extreme pressure (EP) between two or more different materials may lead to their welding. This can be avoided by the addition of EP-additives.

A high pressure between sliding contacts leads also to increasing temperatures of a lubricant. At elevated temperatures suitable EP-additives start to decompose formation of sulphur compounds, derivatives of phosphoric acid, or chloro-carbons. These substances react with metal surfaces under formation of metal sulfide, metal phosphate, or metal chloride. The so formed metal salt layers shear off under extreme pressure and are preventing a welding of such sliding contacts.

Unfortunately, the formation of the metal salts also leads to an increase of wear, which is typically a major disadvantage of EP-additives. Therefore, it is highly important that the EP-additives only decompose under extreme pressure conditions.

Furthermore, a careful matching of different additive types in a lubricant is necessary in order to obtain the best performance.

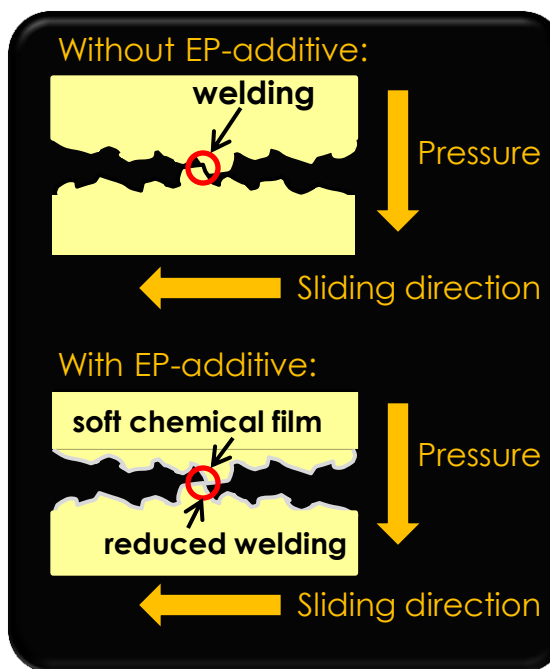
IoLiTec's EP-additives are characterized by their marginal vapor pressure, non flammability as well as high thermal and chemical stability.

For further questions, do not hesitate to contact our experts:

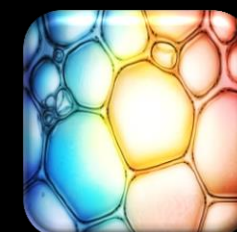
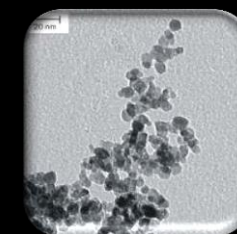
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Table . IOLITEC's actual portfolio of EP-additives.

Product Code	Additive	Quantities	Base oil	Typical amount
LB-0001-HP	IoLiTive® LUB 0100	25 g to bulk	PAO, mineral oil	0.1 to 1 wt%
LB-0007-HP	IoLiTive LUB 0700	25 g to bulk	PG, polyester, PAO, mineral oil	0.1 to 1 wt%
LB-0003-HP	IoLiTive LUB 0300	25 g to bulk	Polyester	0.1 to 1 wt%
LB-0030-HP	IoLiTive LUB 1010	25 g to bulk	Water-based lubricants	0.1 to 1 wt%
LB-0011-HP	IoLiTive LUB 1100	25 g to bulk	PG, polyester, PAO, mineral oil	0.1 to 1 wt%
LB-0017-HP	IoLiTive LUB 1700	25 g to bulk	PG, polyester, PAO, mineral oil	0.1 to 1 wt%
LB-0019-HP	IoLiTive LUB 1900	25 g to bulk	PG, polyester	0.1 to 1 wt%
LB-0020-HP	IoLiTive LUB 2000	25 g to bulk	PG	0.1 to 1 wt%
LB-0005-HP	IoLiTive LUB 0500	25 g to bulk	PG	0.1 to 1 wt%



EP-additives form a chemical film, resulting in reduced welding.



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