Technical Information
Fuel & Lubricant Solutions

BASF
We create chemistry

SYNATIVE® LE 6000

Low-foaming polymer

Chemical composition

SYNATIVE® LE 6000 is a excellent lubricity enhancer

Properties

Appearance

Liquid

Physical data

Characteristics	Unit	SYNATIVE® LE 6000
Concentration	%	approx. 100
Water	w%	< 0.2
Cloud point (EN 1890) 10 w% aqueous	°C	approx. 16-19
pH (ASTM E70) 2.5w% aqueous		8.6 – 9.1
Color (ASTM D1209)	APHA	< 100
Average molecular weight	g/mol	approx. 3600
Viscosity at 25 °C (ASTM D7042)	cps	approx. 600
Specific gravity at 25 °C (ASTM D1298)	g/cm^3	approx. 1.02
Pour point (ASTM D97)	°C	approx. – 21
Foam height (Ross miles, 0,1w% aqueous at 50 °C)	mm	approx. 0
Surface tension (EN 14370, 0,1w% aqueous, 25 °C)	dynes/cm	approx. 36
Solubility in water at 25 °C	%	insoluble

Quality control

The above-listed data represent average values at the time of going to press of this Technical Information. They are intended as a guide to facilitate handling and cannot be regarded as specified data. Specified product data are issued as a separate product specification.

Additional Information

Regulatory Status

For Information on the status of registration please see the Information Data Sheet (ISP). Please contact your customer representative.

Applications

Lubricants

SYNATIVE® LE 6000 can be employed as lubricant in synthetic metalworking fluids, mould-release agents and synthetic spin finishes.

SYNATIVE® LE 6000 can also be used as heat transfer fluids and hydraulic fluids, for example in the electronics industry in the production of printed circuit boards.

SYNATIVE® LE 6000 is an effective lubricant, especially at elevated temperatures, and is easy to wash off.

SYNATIVE® LE 6000 does not form tarry residues at high temperatures.

SYNATIVE® LE 6000 does not foam or, at worst is very low foaming.

It is insensitive to cations such as Ca^{2}+, Mg^{2}+ and other hardness ions, and does not react with soluble alkali salts or with polyanionic compounds.

Processing

It is advisable to stir the surfactant into the water when making up aqueous solutions. Solutions mixed in the reverse order have a much higher viscosity.

Compatibility

As a non-ionic surfactant, SYNATIVE® LE 6000 can be combined with nonionic, anionic and cationic surfactants.

The resistance of SYNATIVE® LE 6000 to acids is virtually unlimited in conventional applications. SYNATIVE® LE 6000 is also resistant to alkalis to some extent.

Storage

Storage stability

a) SYNATIVE® LE 6000 should be stored indoors in its original packaging, which should be kept tightly sealed. Storerooms must not be overheated.
b) SYNATIVE® LE 6000 is hygroscopic, with the result of absorbing moisture very quickly. Drums must be resealed each time they are opened.
c) SYNATIVE® LE 6000 must be protected from frost.
d) SYNATIVE® LE 6000 can become slightly cloudy if stored at low temperatures, but this has no effect on the product performance. This cloudiness can be dissipated by heating them to ca 40 – 50 °C.
e) Liquid which has solidified or shows signs of precipitation should be heated to ca. 50 °C and re-homogenized before it is processed.
f) Drums that have solidified or that have begun to precipitate should be reconstituted by gentle heating, preferably in a heating cabinet. The temperature must not be allowed to exceed 50 °C. This also applies if drums are heated by external electrical elements. Internal electrical elements should not be used because of the localized anomalies in temperature that they cause.
g) SYNATIVE® LE 6000 must be blanketed with nitrogen if stored inheated tanks (at 40 – 50 °C) to prevent from coming into contact with air. Constant, gentle stirring helps to prevent discolouration as a result of prolonged contact with electrical elements or external heating coils.

Materials

The following materials can be used for tanks and drums.

AISI 316 Ti stainless steel (X6CrNiTi1810)
AISI 321 stainless steel (X10CrNiMoTi1810)
Iron lined with a phenolic resin

Shelf life

Provided it is stored properly and the drums are kept tightly sealed, SYNATIVE® LE 6000 has a shelf life of at least two years in its original packaging.

Safety

When using this product, the information and advice given in our **Safety Data Sheet** should be observed. Due attention should also be given to the **precautions** necessary for handling chemicals.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product.

It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

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