
Technical Information

June 2015
Supersedes issue dated January 2014

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WF-No. 6687

® = Registered trademark of BASF

Dehypon® LT 104

Nonionic, low foaming surfactant for the detergent and cleaner industry

Chemical character	Dehypon® LT 104 is a low foaming, nonionic surfactant. It is a fatty alcohol alkoxyat, endcapped.
PRD-No.*	30528465 * BASF's commercial product numbers.
Appearance	Dehypon® LT 104 is a white paste at room temperature and tends to form sediment.

Handling and Storage

Handling	<ol style="list-style-type: none">Dehypon® LT 104 should be stored indoors in a dry place. Storage rooms must not be overheated.Dehypon® LT 104 is hygroscopic due to its good solubility in water, with the result that it may absorb moisture very quickly. Drums must be resealed each time they are opened.Dehypon® LT 104 is a white paste and tends to form sediment.Product that has solidified or that shows signs of sedimentation should be heated to 40 – 60 °C and homogenized before it is processed. Please mix sufficiently prior to use.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 70 °C. Please mix sufficiently prior to use. 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.Dehypon® LT 104 must be blanketed with nitrogen if it is stored in heated tanks (at 30 – 60 °C) to prevent it from coming into contact with air. Constant, gentle stirring helps to prevent it being discolored as a result of prolonged contact with electrical elements or external heating coils.Please refer to the latest Safety Data Sheet for detailed information on product safety.
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Materials	The following materials can be used for tanks and drums: <ol style="list-style-type: none">AISI 321 stainless steel (X6CrNiTi1810)AISI 316 Ti stainless steel (X6CrNiMoTi17122)
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Shelf life	Provided it is stored properly and drums are kept tightly sealed, Dehypon® LT 104 has a shelf life of at least two years in its original packaging.
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Properties

Some physical properties are listed in the table below. These are typical values only and not all of them are monitored on a regular basis. They are correct at the time of publication and do not necessarily form part of the product specification. A detailed product specification is available on request or via BASF's WorldAccount: <https://worldaccount.basf.com> (registered access).

Dehypon® LT 104	Unit	Value
Physical form (23 °C)		paste
Concentration	%	approx. 100
Cloud points (EN 1890)*		
Method D	°C	approx. 46
Method E	°C	approx. 40
pH value (EN 1262, solution B)**		approx. 7
Density (DIN 51757, 23 °C)	g/cm ³	approx. 0.99
Congeaing point (DIN 51583)	°C	approx. 7
Viscosity (EN 12092, 23 °C, Brookfield, 60 rpm)	mPa·s	approx. 70
Hydroxyl value (DIN 53240)	mg KOH/g	approx. 4
Wetting (EN 1772, distilled water, 23 °C, 2 g Soda ash/l)		
0.5 g/l	s	approx. 100
1.0 g/l	s	approx. 35
2.0 g/l	s	approx. 15
Foam volume (EN 12728, 40 °C, 2 g/l water at a hardness of 1.8 mmol Ca-ions/l, after 30 s)	cm ³	approx. 20
Surface tension (EN 14370, 1 g/l in distilled water, 23 °C)***	mN/m	approx. 28

* *Cloud point EN 1890:*
Method D: 5 g of surfactant + 45 g of butyldiglycol solution (c = 250 g/l)
Method E: 5 g of surfactant + 25 g of butyldiglycol solution (c = 250 g/l)

** *The pH value of Dehypon® LT 104 can decrease during storage, but this does not have any effect on its performance.*

*** *Applying Harkins-Jordan correction.*

Solubility

Details on the solubility of Dehypon® LT 104 in various solvents are given in the table below:

Solubility of Dehypon® LT 104 (10% at 23 °C)

Distilled water	+
Potable water (2.7 mmol Ca ²⁺ -Ions/l)	+
Caustic soda (5%)	-
Hydrochloric acid (5%)	+
Salt solution (5%)	-
Solvent naphtha	-
Ethanol, Isopropanol	+
Aromatic hydrocarbons	-

+ = *clear solution*

± = *sparingly soluble (insoluble sediment)*

- = *insoluble (phase separation)*

s = *forms an opaque soluble, homogeneous emulsion*

Viscosity

The relationship between viscosity and temperature is always an important point to consider when Dehypon® LT 104 is stored or shipped. This is shown in the following table (Brookfield LVT):

Temperature (°C)	Viscosity (mPa·s)
0	> 100 000
10	> 100 000
20	approx. 90
23	approx. 70
30	approx. 50
40	approx. 30
50	approx. 20
60	< 20

We would recommend the preparation of 10 – 25% stock solutions of Dehypon® LT 104 if it is to be used in the form of very dilute solutions, or if it is to be added to other solutions. This makes it very much easier to dilute it later on.

Dehypon® LT 104 can form fairly stiff gels at certain concentrations when water is added. The figures below were measured using a Brookfield-Viscosimeter at 23 °C and 60 rpm.

The viscosity of Dehypon® LT 104 at 23 °C as a function of concentration in water:

Water content (%)	Viscosity (mPa-s)
10	approx. 1750
20	approx. 185
30	approx. 190
40	approx. 180
50	approx. 160
60	approx. 130
70	approx. 110
80	approx. 95
90	approx. 95

The numbers reported have to be regarded as maximum values; the values measured immediately after mixing will be lower than the numbers reported.

Safety

We are not aware of any ill effect that can result from using Dehypon® LT 104 for the purpose for which it is intended and from processing it in accordance with current practices.

According to the experience that we have gained over many years and other information at our disposal, Dehypon® LT 104 does not exert harmful effects on health, provided it is used properly, due attention is given to the precautions necessary for handling chemicals, and the information and advice given in our Safety Data Sheets are observed.

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June 2015