

Technical Data Sheet**Lupranat[®] MESA frozen**

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Version: 02

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Chemical nature

Lupranat MESA frozen is a 4,4'-diphenylmethane diisocyanate (MDI) with low acidity. Lupranat MESA frozen contains a stabiliser, in order to prevent yellowing.

Applications

Lupranat MESA frozen is used for the manufacture of elastomers and thermoplastic polyurethanes. It is also used for the production of pigments, adhesives and coatings. Lupranat MESA frozen must not be used for the production of polyurethane products which will come into contact with foodstuffs.

Typical properties

Appearance at room

temperature:

white crystalline

Appearance as a liquid:

colourless

Molar mass	250	g/mol	
Purity	99.5	g/100 g	titrimetric
NCO-content	33.5	g/100 g	ASTM D 5155-96 A
2,4'-isomer	1.5	g/100 g	GC
Melting point	38.5	°C	ASTM D 1638-74
Acidity as HCl	5	mg/kg	titrimetric
Hydrolysable chlorine	10	mg/kg	titrimetric
Total chlorine	20	mg/kg	ASTM D 1638-74
Viscosity at 42 °C	5	mPa·s	DIN 53 018
Density at 42 °C	1.22	g/cm ³	DIN 51 757

Specific heat

at 50 °C

1.5 kJ/(kg · K)

Latent heat of fusion

110

kJ/kg

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Lupranat[®] MESA frozen**Delivery**

Lupranat MESA frozen can be delivered in following form:

	container	quantity
Lupranat MESA frozen	non-returnable drum	240 kg

Transport temperature should normally be the same as storage temperature.

Storage

Lupranat MESA frozen is sensitive to moisture. The products slowly form dimeric diphenylmethanediisocyanate, which is seen as a precipitate and which might influence the properties of the final products if used for special applications. This dimer cannot be removed by heating.

The product should be stored at temperatures below +5 °C, but preferably considerably below 0 °C; under this condition and if moisture and oxygen are excluded, Lupranat MESA frozen can be stored for at least 6 months.

Drums containing Lupranat MESA frozen stored at temperatures lower than room temperature must not be opened in a moisture containing atmosphere. Complete warming up to room temperature prior to utilization avoids condensation of moisture on the crystals.

The product can be melted in a hot air oven at an air temperature of 80 °C to 100 °C. The heating period must be as short as possible; during heating the overall temperature of the product must not exceed 70 °C. Local overheating must be avoided, because the product will be destroyed at temperatures above 230 °C with consequent gas production. Rolling of the drums in a hot air oven is the recommended method of dissolving the crystals. After melting out, the contents of the drum must be thoroughly mixed.

More detailed information on transport and storage of isocyanates is given in the ISOPA-Guidelines "For Safe Loading / Unloading Transportation Storage of TDI and MDI in Bulk" and "For the Safe Transportation, Unloading & Storage of Packaged TDI & MDI".

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Lupranat[®] MESA frozen**Safety advice and environmental protection**

Labelling, transportation, storage, processing, waste treatment and disposal must comply with national regulations. Occupational exposure limits are to be observed.

Lupranat MESA frozen is classified as harmful if inhaled. It causes skin irritation and serious eye irritation. It

may cause respiratory irritation. It may cause sensitisation by inhalation and skin contact. It is suspected of causing cancer. It may cause damage to organs through prolonged or repeated inhalation exposure.

Before processing the product, we recommend reading the safety data sheet. For further information consult our Technical Information leaflet "Safety and Precautionary Measures for the Processing of Polyurethane Systems".

In order to avoid accidents, the residual product in the drums must be handled with care. Any water or moisture which is allowed to enter the drum will react with Lupranat MESA frozen and release carbon dioxide. Unless action is taken to prevent moisture entry or gas entrapment, the drums will become pressurized and could rupture.

If it is intended to use BASF materials for the manufacture of toys or consumer goods (e. g. products which will come into contact with foodstuffs or with the skin) or medical products, national and international regulations have to be observed. Where no regulations exist, consumer goods or medical products must at least comply with European legislation. We recommend contacting our Sales and our Ecology and Product Safety departments.

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Disposal of drums

Residues of MDI remaining in drums must be neutralized. Information on disposal is given in our Technical Information „Safety and Precautionary Measures for the Processing of Polyurethane Systems“. Please contact our local agencies for further information on national disposal regulations.

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Contact details can be found at www.basf.com/global/en/who-we-are/organization/locations.html.**