

## Product Information

CM – Monomers Division

### TECHNICAL DATA SHEET

Document name: TDS\_Lupranat MESA\_10703180  
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Product: **Lupranat® MESA**  
PBG-No.: 10703180  
Chemical Name: Isocyanate component

**Chemical nature** Lupranat MESA is a 4,4'-diphenylmethane diisocyanate (MDI) with low acidity. Lupranat MESA contains a stabilizer, in order to prevent yellowing.

**Applications** Lupranat MESA is used for the manufacture of elastomers and thermoplastic polyurethanes. It is also used for the production of pigments, adhesives and coatings. Lupranat MESA 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

|                       |      |                   |
|-----------------------|------|-------------------|
| 2,4'-isomer           | 1.5  | g/100g            |
| Acidity as HCl        | 5    | mg/kg             |
| Density at 42 °C      | 1.22 | g/cm <sup>3</sup> |
| Hydrolysable chlorine | 10   | mg/kg             |
| Melting point         | 38.5 | °C                |
| Molar mass            | 250  | g/mol             |
| NCO content           | 33.5 | g/100g            |
| Purity                | 99.5 | g/100g            |
| Total chlorine        | 20   | mg/kg             |
| Viscosity at 42 °C    | 5    | mPa·s             |

|                          |     |             |
|--------------------------|-----|-------------|
| Specific heat<br>at 50°C | 1.5 | kJ/(kg · K) |
| Latent heat of fusion    | 110 | kJ/kg       |

**Delivery** Lupranat MESA 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 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.

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The product should be stored at temperatures below 0 °C, but preferably considerably below -10 °C; under this condition and if moisture and oxygen are excluded, Lupranat MESA can be stored for at least 6 months.

Drums containing Lupranat MESA 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".

### 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 is classified as harmful if inhaled. It causes skin irritation and serious eye irritation. It may cause respiratory irritation. It may cause sensitization by inhalation and skin contact. It is suspected of causing cancer. It may cause damage to organs though 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 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.

**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.