

Technical Data Sheet**Lupranat[®] MM 103**

Page: 1 of 3

Version: 07

Edition: 08.19

Chemical nature

Lupranat MM 103 is a carbodiimide-modified diphenylmethane-4,4-diisocyanate (MDI). The average functionality is about 2.2.

Applications

Lupranat MM 103 is used for the production of flexible polyurethanes such as microcellular elastomers, flexible and semi-rigid foams as well as for compact RIM parts. It is also used for the manufacture of coatings and adhesives.

Typical properties

Appearance: bright yellow, clear liquid

NCO-content	29.5	g/100 g	ASTM D 5155-96 A
Acidity as HCl	4	mg/kg	ASTM D 1638-74
Viscosity at 25 °C*	39	mPa·s	DIN 53 018
Density at 25 °C	1.22	g/cm ³	DIN 51 757

* at delivery

Delivery

The delivery is by road tankers, in containers containing 1000 l and in non-returnable drums. Transport temperatures should be between 20 °C and 40 °C. If the material is in transit for more than 4 days, a transport temperature of 20 °C to 25 °C is recommended. Temperatures below 20 °C should be avoided.

Lupranat[®] MM 103

Technical Data Sheet

Page: 2 of 3
Version: 07
Edition: 08.19

Storage

Lupranat MM 103 must be protected from moisture. The ideal storage temperature is 20 °C to 25 °C. Under these conditions and when moisture is excluded, the shelf life of Lupranat MM 103 is at least six months. Drums must be kept airtight. Storage tanks should be blanketed with dry air or with nitrogen.

Longer storage leads to a lasting increase of viscosity depending on the temperature. In extreme cases a precipitate may form which will not be removed by heating.

Storage for longer periods below + 20 °C can lead to partial crystallisation.

Crystallised material must be melted out immediately by short term heating. The product temperature must not exceed 60 °C. Local overheating must be avoided, as Lupranat MM 103 will decompose with the formation of gas at temperatures above 230 °C. 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 MM 103 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 MM 103 and release carbon

Technical Data Sheet

Page: 3 of 3

Version: 07

Edition: 08.19

Lupranat[®] MM 103

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.

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.

® = registered trademark of BASF

The data contained in this document as well as advice or other support services are based on our current knowledge and experience and are provided according to our best knowledge. In view of many factors that may affect processing and application of our products, this data does not relieve processors from carrying out their own investigations and tests, particularly with regards to the suitability of the goods supplied for the processes and purposes they intend to use them for; neither does this data imply any guarantee of certain properties, or the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, measured values etc. given herein may change without prior notice 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.

**For further details or questions please contact the BASF entity responsible for your country.
Contact details can be found at www.basf.com/global/en/who-we-are/organization/locations.html.**