

# Lupranate® M

4,4' Diphenylmethane Diisocyanate

Lupranate® M Isocyanate, a solid at room temperature, is essentially pure 4,4'-diphenylmethane diisocyanate, having a functionality of 2.0. Lupranate® M Isocyanate is used in the isocyanate component for the preparation of elastomeric and thermoplastic polyurethanes, flexible and semi- flexible integral skin foams, adhesives, sealants and coatings.

## TYPICAL PROPERTIES

Appearance	white to light yellow solid or liquid
NCO Content, wt%	33.5
Viscosity @ 25 °C, cP	Solid
Nominal Functionality	2
Vapor Pressure @ 25 °C, mm Hg	0.0003
Specific Gravity @ 25 °C, g/cm <sup>3</sup>	1.22
Hydrolyzable chlorine, ppm	< 20
2,4' Isomer, wt%	2.0



BASF Corporation is fully committed to the Responsible Care® initiative in the USA, Canada, and Mexico. For more information on Responsible Care® go to:

**U.S.:** [www.basf.us/responsiblecare\\_usa](http://www.basf.us/responsiblecare_usa)

**Canada:** [www.basf.us/responsiblecare\\_canada](http://www.basf.us/responsiblecare_canada)

**México:** [www.basf.us/responsiblecare\\_mexico](http://www.basf.us/responsiblecare_mexico)

### **BASF Corporation**

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### STORAGE

The product is moisture sensitive and will yellow when exposed to air, especially under the influence of light. Liquid Lupranate® M Isocyanate should be stored within the relatively narrow temperature range of approximately 40-50 °C under nitrogen for approximately 14 days. It can be stored as a solid below 5 °C. Under this cold condition and if moisture and air are excluded, the product is storage stable for up to six months shelf life. If stored at temperatures other than those cited, dimer formation will be excessive affecting the performance of the product. At room temperature Lupranate® M Isocyanate slowly forms solid dimer of diphenylmethane diisocyanate which appears as turbidity or sediment after melting. This sediment cannot be resolubilized during later processing. Therefore, storage at room temperature is not recommended. If Lupranate® M Isocyanate is stored as a solid, melting for use is done by rolling the drum in a hot air oven at 80-100 °C. The drum contents should not be heated above 70 °C to minimize dimer formation.

### SHIPPING INFORMATION

This product is available in liquid form in heated tank trucks or as a solid in drums.

### HANDLING RECOMMENDATION

Excessive or prolonged heating at 70-100 °C may cause dangerous pressure build-up. Heating by electrical means is not recommended due to the danger of localized overheating, which would result in dimer formation. Melting in a water bath is not recommended because of potential danger of the isocyanate reacting with water in case of drum leakage. Care should be taken when heating the drum to ensure that it does not leak.

### HAZARD STATEMENT

MDI products are 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 may cause damage to organs through prolonged or repeated inhalation exposure. Before processing the product, we recommend reading the safety data sheet. Labelling, transportation, storage, processing, waste treatment and disposal must comply with nation regulations. Occupational exposure limits are to be observed. 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 the MDI and release carbon dioxide. Unless action is taken to prevent moisture entry or gas entrapment, the drums will become pressurized and may rupture. For further information please consult our "MDI Handbook".

### IN CASE OF CHEMICAL EMERGENCY

Call CHEMTREC (800-424-9300) or BASF (800-832-HELP) day or night for assistance and information concerning spilled material, fire, exposure and other chemical accidents. Outside the U.S., call (703-527-3887).

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**Attention:** This product is sold solely for use by industrial institutions. Refer to our Safety Data Sheet (SDS) regarding regulatory compliance, safety, hazards, spill procedures and disposal of this product. An SDS as well as additional information on BASF urethane chemicals may be obtained by visiting [polyurethanes.basf.us](http://polyurethanes.basf.us).

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