

## Technical Data Sheet

### BASF Lupranat<sup>®</sup> M20S

#### Description

Lupranat<sup>®</sup> M20S is a solvent-free product based on 4,4'-diphenylmethane diisocyanate (MDI) containing oligomers of high functionality and isomers. The average functionality is 2.7. Lupranat<sup>®</sup> M 20 S is principally used for the manufacture of insulating foams and higher density rigid foams. It is also used for the production of semi-rigid foams in the automotive industry and sound insulation as well as for packaging foams, casting materials, binders, and adhesives.

#### Typical Component Properties

Serial No.	Characteristics	Unit	Specifications
1.	Physical State	None	Liquid
2.	Colour	None	Dark Brown
3.	Specific Gravity	None	1.24 (25°C)
4.	Viscosity	cps	160-240 (25°C)

#### Typical Reaction Characteristics

Serial No.	Characteristics	Unit	Specifications
1.	Ideal Operated Temperature	Celsius	21-23°C
2.	NCO Content	%	30.5 – 32.5
3.	Acidity	mg/kg	≤200
4.	Phenyl Isocyanate Content	ppm	≤50
5.	Specific Heat	K J/kg.K	1.51 (approx.)
6.	Coefficient of Thermal Expansion	K <sup>-1</sup>	6.59 x 10 <sup>-4</sup>
7.	Average Functionality	None	2.7

#### Handling and Storage

The product must be stored out of direct sunlight and weather. The containers must always be kept sealed against moisture. Ideal storage temperature is approximately 30°C or less. Under these conditions, the product will remain stable for 6 months.

LUPRANAT<sup>®</sup> M20S may undergo partial crystallization at temperatures below 0°C. The product can, however, be brought back into the liquid state by heating the entire contents of the drum for short time to a maximum of 70°C, although this may lead to an increase in the solids content. Drums - including empty ones - should always be kept tightly sealed. The product should never be allowed to come into contact with water, which reacts with LUPRANAT<sup>®</sup> M20S to form polyurea and carbon dioxide. Contact with water in any form (damp drums, solvents containing water, moist air) must be prevented not only during storage, but also when removing material from drum and during processing. Failure to do so may lead to a dangerous build-up of pressure in tanks and drums due to the generation of carbon dioxide. In addition, polyurea forming in LUPRANAT<sup>®</sup> M20S can cause solids to separate out, leading to blockages in the filters, pumps and pipelines of the processing equipment and resulting in production problems.

## Safety Precautions

LUPRANAT ® is a blend of diphenylmethane-diisocyanate, isomers and homologues.

- Because of its character, LUPRANAT ® may cause slight to moderate irritation when it is exposed to the skin, the eyes, and the mucous membranes.
- Safety goggles and impermeable protective gloves should always be worn if there is a risk of direct exposure when handling LUPRANAT ®.
- Splashes that are exposed to skin must be wiped off immediately and the contaminated areas must be thoroughly washed with soap and water.
- Affected areas should be treated with a good barrier cream.
- To prevent further contact with the skin, contaminated clothing should be changed immediately and thoroughly cleaned before reuse.
- The product must be kept away from food items.
- Anyone involved in the application of the system must familiarize themselves with the safety precautions required for rigid polyurethane foams.

## Disclaimer

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