Chemical nature

Lupranat MX 121/1 is a solvent-free product based on 4,4'-diphenylmethane diisocyanate (MDI). It contains oligomers of high functionality and isomers. The average functionality is 2.2.

Applications

Lupranat MX 121/1 is mainly used for the production of binders, adhesives, coatings, and casting materials.

Typical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Unit</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>brown liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCO-Content</td>
<td>33.0</td>
<td>g/100 g</td>
<td>ASTM D 5155-96A</td>
</tr>
<tr>
<td>Acidity as HCl</td>
<td>20</td>
<td>mg/kg</td>
<td>ASTM D 1638-74</td>
</tr>
<tr>
<td>Viscosity at 25 °C*</td>
<td>19</td>
<td>mPa·s</td>
<td>DIN 53 018</td>
</tr>
<tr>
<td>Density at 25 °C</td>
<td>1.23</td>
<td>g/cm³</td>
<td>DIN 51 757</td>
</tr>
</tbody>
</table>

* at delivery

Delivery

The delivery is by road tankers. The transport temperature should be between 20 °C and 40 °C.

Storage

Lupranat MX 121/1 must be protected from moisture. The ideal storage temperature is 15 to 25 °C. Under these conditions and when moisture is excluded, the shelf life of Lupranat MX 121/1 is at least six months. 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 10 °C can lead to partial crystallisation.
Crystallised material must be melted out immediately by short term heating. The product temperature must not exceed 70 °C. Local overheating must be avoided, as Lupranat MX 121/1 will decompose with the formation of gas at temperatures above 230 °C. 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 MX 121/1 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 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”.

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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