Lupranate® 223 Isocyanate

Lupranate 223 Isocyanate is a low viscosity derivative of both pure-MDI and polymeric-MDI. With a functionality of approximately 2.2, this isocyanate can be formulated into applications that require good flow and working time such as 1- and 2-component adhesives and coatings.

**TYPICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>light brown liquid</td>
</tr>
<tr>
<td>NCO content, wt%</td>
<td>27.5</td>
</tr>
<tr>
<td>Viscosity @ 25°C, cps</td>
<td>140</td>
</tr>
<tr>
<td>Flash point, °C (COC)</td>
<td>&gt;200</td>
</tr>
<tr>
<td>Density @25°C, g/cm³</td>
<td>1.20</td>
</tr>
<tr>
<td>Initial boiling point, 5mm Hg, °C</td>
<td>190</td>
</tr>
<tr>
<td>Vapor Pressure @25°C, mm Hg</td>
<td>0.0002</td>
</tr>
</tbody>
</table>

**Storage**

Lupranate 223 Isocyanate is supplied in tank trucks or drums. Once a container has been opened, care should be taken to exclude moisture. The most favorable temperature for storage is 20-30°C. If stored at higher temperatures, or if moisture is not excluded, an undesirable increase in viscosity will occur. Below 20°C solid crystals may form and settle out, which can alter the performance of the product. The solid crystals contain pure MDI and in this solid form may exhibit the same dimerization characteristics as pure MDI. Unless prompt action is taken to melt the product, subsequent dimerization will proceed and may deteriorate the clarity and assay of the product. Melting the crystals is done by rolling the drum in a hot air oven at 70-90°C. The drum contents should not be heated above 60°C to minimize dimer formation.

**Warning**

Excessive heating or prolonged heating at 80-100°C may cause dangerous pressure build-up. Heating by electrical means is not recommended due to the danger of local 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. Rolling the drum in atmospheric steam is an alternative procedure that can be used providing care is taken to ensure that the drum does not leak. The shelf life of Lupranate 223 Isocyanate is six months if the temperature is maintained at 20-30°C and moisture is excluded.

**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.

**Attention:**

This product is sold solely for use by industrial institutions. Refer to our Material Safety Data Sheet (MSDS) regarding regulatory compliance, safety, hazards, spill procedures and disposal of this product. An MSDS as well as additional information on BASF urethane chemicals may be obtained by telephoning BASF Corporation, Urethane Customer Service at (877) 297-3322 or faxing (734) 324-6866.

**Important:**

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