Desmodur® E 23

Characterization

Aromatic polyisocyanate prepolymer based on diphenylmethane diisocyanate (MDI).

(A)
As a binder for the formulation of moisture-curing, one-component coatings and adhesives.

(B)
As a hardener for hydroxyl-bearing co-reactants.

Form supplied
Solvent-free liquid

Specification

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Unit of measurement</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCO content</td>
<td>15.4 ± 0.4</td>
<td>%</td>
<td>M105-ISO 11909</td>
</tr>
<tr>
<td>Viscosity at 23 °C</td>
<td>1,800 ± 250</td>
<td>mPa·s</td>
<td>M014-ISO 3219/A.3</td>
</tr>
</tbody>
</table>

Other data*

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Unit of measurement</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equivalent weight</td>
<td>266 - 280</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 193</td>
<td>°C</td>
<td>DIN EN ISO 2719</td>
</tr>
<tr>
<td>Density at 20 °C</td>
<td>approx. 1.13</td>
<td>g/cm³</td>
<td>DIN EN ISO 2118</td>
</tr>
</tbody>
</table>

*These values provide general information and are not part of the product specification.
Desmodur® E 23

Solubility / thinnability
In general, Desmodur® E 23 has good compatibility with ethyl acetate, butyl acetate, 1-methoxypropylacetate-2, xylene, Shellsol® A and Solvesso® 100. However, the solutions formed must be tested for their storage stability. Prolonged storage of a solution with low binder content may result in turbidity and sedimentation. Only PU grade solvents should be used (< 0.05 % water). The solvent should not contain reactive groups.

Compatibility
In general, Desmodur® E 23 is compatible with Desmophen®/Baycoll® polyols, with other Desmodur® products and with flexibilizers.

Properties / Applications
Desmodur® E 23 is suitable for use in the formulation of moisture-curing one-component systems which, when thinned with a suitable solvent, can be used as primers and sealers for porous substrates to provide protection against moisture, oil, fuel and other chemicals. It can also be used as a binder in the formulation of synthetic resin mortars. Coatings formulated with Desmodur® E 23 are used as highgrade anti-corrosion systems for steel in civil and hydraulic engineering applications. In combination with suitable Desmophen® polyols, Desmodur® E 23 yields tough but flexible, wear-resistant coatings and sealers. Desmodur® E 23 is also suitable for use in the formulation of solvent-free moisture-curing one-component adhesives or in combination with Baycol® to formulate two-component adhesives. These can be used to bond many materials, e.g. wood, metal and plastic.

Storage
- Storage in original sealed Covestro container.
- Recommended storage temperature: 0 - 25 °C
- Protect from moisture, heat and foreign material.

General information: The product is sensitive to moisture and should therefore be stored in its sealed original containers. Storage at high temperatures will lead to an increase in viscosity and a reduction of the NCO content.
Storage time

Covestro represents that, for a period of six months following the day of shipment as stated in the respective transport documents, the product will meet the specifications or values set forth in section "specifications or characteristic data" above, whatever is applicable, provided that the product is stored in full compliance with the storage conditions set forth in and referenced under section "storage" above and is otherwise handled appropriately. The lapse of the six months period does not necessarily mean that the product no longer meets specifications or the set values. However, prior to using said product, Covestro recommends to test such a product if it still meets the specifications or the set values. Covestro does not make any representation regarding the product after the lapse of the six months period and Covestro shall not be responsible or liable in any way for the product failing to meet specifications or the set values after the lapse of the six months period.

Labeling and statutory requirements

This product data sheet is only valid in conjunction with the latest edition of the corresponding Safety Data Sheet. Any updating of safety-relevant information – in accordance with statutory requirements – will only be reflected in the Safety Data Sheet, copies of which will be revised and distributed. Information relating to the current classification and labeling, applications and processing methods and further data relevant to safety can be found in the currently valid Safety Data Sheet.