

# Industrial Coatings

## Technical Data Sheet

# Sovermol<sup>®</sup> 100



<b>Product Description</b>	Sovermol <sup>®</sup> 100 is a polyol that is designed to be used in combination with other Sovermol <sup>®</sup> types in solvent-free, UV-stable 2-component coating applications.
<b>Key Features &amp; Benefits</b>	<ul style="list-style-type: none"><li>- Increases the glass transition temperature</li><li>- Increases crosslinking density</li><li>- FDA* compliant</li></ul>
<b>Chemical Composition</b>	Branched polyether

\*The FDA status of this product is available upon request from the contact information below.

### Properties

<b>Product Specifications</b>	Acid value	< 1 mg KOH/g
	Hydroxyl value	840 – 920 mg KOH/g
	Hydroxyl equivalent weight	61 – 67
	Water content	< 0.2%
	Viscosity at 25°C (Brookfield, spindle 21, 6 rpm)	5,000 – 7,000 cps
<b>Typical Characteristics</b>	Appearance	medium viscous, clear liquid
	Density at 25°C	1.06 – 1.10 g/cm <sup>3</sup>
	Functionality	~ 3

These typical values should not be interpreted as specifications.

### Applications

Sovermol<sup>®</sup> 100 is a polyol that is designed to be used in combination with other Sovermol<sup>®</sup> types for solvent-free, UV-stable coatings of high chemical resistances and hardness, where it increases the glass transition (T<sub>g</sub>) temperature.

Sovermol<sup>®</sup> 100 is recommended for applications such as:

- Solvent-free, UV-stable industrial coatings of high chemical resistances and hardness

### Processing

Sovermol<sup>®</sup> 100 is normally used together with other Sovermol<sup>®</sup> types. As a sole polyol, it is necessary to homogenize at least 10 minutes to achieve a good compatibility with the isocyanate by increasing the viscosity.

Mixing ratio:Aromatic	Mixing ratio:Aromatic	Mixing ratio:Aliphatic
100 parts Sovermol <sup>®</sup> 100	100 parts Sovermol <sup>®</sup> 100	100 parts Sovermol <sup>®</sup> 100
5 parts Zeolite paste	5 parts Zeolite paste	5 parts Zeolite paste
213 parts polymer MDI	244 parts MDI (Carbodiimid-modified)	1 part Dibutyl tin dilaurate
		287 parts aliphatic isocyanate (HDI based)

**Typical Cured Properties of Sovermol<sup>®</sup> 100 (in combination with):**

Properties	Polymer MDI	MDI (Carbodiimid-modified)
Gel time, 30 g	23.5 minutes	40 minutes
Tg	136°C	--
Exothermic, 100g	162°C	--
Hardness, room temperature, after 1 day	71 Shore D	79 Shore D
Hardness, room temperature, after 28 days	86 Shore D	88 Shore D
Hardness, at 80°C, after 2 days	93 Shore D	95 Shore D

**Starting Point Formulation**

The following starting point formulations are recommended for initial evaluations of Sovermol<sup>®</sup> 100. Additional optimization of the formulations will be required to achieve desired results for specific applications.

Part I	A	B	C	D	E
Sovermol <sup>®</sup> 750	96.34	81.65	76.75	66.99	70.0
Sovermol <sup>®</sup> 100	--	14.57	19.12	29.13	30.0
Perenol <sup>®</sup> E-8	0.54	0.56	0.58	0.58	--
Dibutyl tin dilaurate (10% solution in Sovermol <sup>®</sup> 750)	0.17	0.29	0.34	0.39	0.1
Zeolite paste	2.91	2.91	2.91	2.91	5.0
Total	100.00	100.00	100.00	100.00	105.00
Part II					
Basonat <sup>®</sup> HB 100	102.40	129.20	138.10	156.00	--
Aliphatic polyisocyanates HDI-based	--	--	--	--	137.0

**Formulation attributes**

Gel time, minutes	38	20	19	27	13.43
Tack-free time, hours	4.5	3	2.9	3	--
Hardness, final, Shore D	65	74	77	79	--
Viscosity of Part I at 25°C, cps	640	775	963	1,175	1,750 theoretical
Viscosity, Part I + Part II at 25°C, cps	975	1,150	1,275	1,575	1,390 theoretical

**Safety****General**

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State, and Local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

**Material Safety Data Sheet**

All safety information is provided in the Material Safety Data Sheet for Sovermol<sup>®</sup> 100.

**Storage**

Properly stored and protected, an unopened container of Sovermol<sup>®</sup> 100 should have a shelf life of at least one year.

## Important

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