

HDI Waterborne Covestro 3100

Characterization:

Hydrophilic aliphatic polyisocyanate based on hexamethylene diisocyanate (HDI).

As the hardener component for high-quality aqueous two-component polyurethane systems and as an additive to improve the property profile of aqueous coating and adhesive systems.

With respect to its composition, the product corresponds to the following sections of the U.S. FDA's guidelines "Title 21 CFR" : Section 175.105 "Adhesives".

Form supplied :solvent-free

Specification:

Property	Value	Unit of measurement	Method
Viscosity at 23 °C	2,800 ± 800	mPa·s	DIN EN ISO 3219/A.3
NCO content	17.4 ± 0.5	%	DIN EN ISO 11 909
Color value (Hazen)	≤ 60		DIN EN

			1557
Monomeric HDI	≤ 0,15	%	DIN EN ISO 10 283

Other data* :

Property	Value	Unit of measurement	Method
Viscosity at 25 °C	approx. 2,500	mPa·s	DIN EN ISO 3219/A.3
Equivalent weigh	approx. 241		
Density at 20 °C	approx. 1.16	g/ml	DIN EN ISO 2811
Flash point	> 250	°C	DIN EN 22 719

*These values provide general information and are not part of the product specification.

Solubility / thinnability :

Bayhydur® 3100 can be thinned with esters, ether esters, xylene and Solvent naphtha® 100. Generally speaking, it has good compatibility

with the solvents listed. However, the solutions formed must be tested for their storage stability. Only PU grade solvents should be used (max. 0.05 % water, absence of reactive groups such as hydroxyl or amino groups).

Properties / Applications :

Because of its hydrophilic character, Bayhydur® 3100 can be easily emulsified in the aqueous phase. It is used mainly as the crosslinking agent for aqueous polyol binders (Bayhydrol®). Bayhydur® 3100 can also be added to conventional OH-free dispersions to improve their property profiles.

Storage :

- Storage in original sealed Covestro container.
- Recommended storage temperature: 0 - 30 °C.
- Protect from moisture, heat and foreign material.

General information: Hydrophilic isocyanates are very moisture-sensitive and react with water to form carbon dioxide and insoluble ureas. The containers must always be kept tightly closed. The access of water in all forms (moist air, solvents, moist containers) must be prevented, because the generation of carbon dioxide can lead to dangerous increases in pressure. Storage at higher temperatures will result in increase of color

and viscosity.

Storage time :

Covestro represents that, for a period of nine 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, what ever 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 nine 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 nine 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 nine 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.

Further information :

The product is used mainly as a hardener in coating materials or adhesives. The handling of coating materials or adhesives containing reactive polyisocyanates and residual monomeric HDI requires appropriate protective measures referred to in the safety data sheet. These products may therefore be used only in industrial or trade applications. They are not suitable for use in homemaker (DIY) applications.

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