

HDI trimer BASF HI-100

ABOUT:

Product description [Basonat® HI 100](#) is an aliphatic isocyanurate for lightfast and weather-resistant 2K polyurethane coatings

Key benefits

- Solvent free
- 100% isocyanurate oligomer
- High weather resistance
- Good light fastness

Chemical nature Isocyanurate based on Hexamethylenediisocyanate (HDI)

Properties

Physical form	Transparent, viscous liquid		
Technical data (no supply specification)	NCO content	DIN EN ISO 11909	21.5 – 22.5%
	NCO equivalent weight		~ 191
	Viscosity at 23	DIN EN ISO 32	2,500-4,000 mP

	°C (73 °F) D = 1,000 s ⁻¹	19	a*s
	Platin cobalt color number (Hazen)	DIN EN ISO 6271	≤ 60
The NCO equivalent weight indicates the amount of Basonat [®] polyisocyanate as supplied containing 1 Mol of active NCO.			

Application

Basonat[®] HI 100 is a solvent free isocyanurate oligomer.

Basonat[®] HI 100 allows a broad choice of solvents. For instance, when less volatile solvents would retard drying excessively, like in furniture coatings, highly volatile solvents can be chosen.

Basonat[®] HI grades are used to formulate particularly lightfast and weather-resistant coatings.

Basonat[®] HI polyisocyanates are used to crosslink most hydroxy group containing resins, e.g. acrylate resins like the Joncryl[®] Polyols and hydroxy polyesters like the hyperbranched Basonol HPE Polyest

ers. Sufficient compatibility with polyester resins containing hydroxyl groups is not always given.

Formulation guidelines

Basonat® HI polyisocyanates can be diluted with esters (e.g. butyl acetate), ketones (e.g. methyl ethyl ketone), glycolether acetates (e.g. methoxypropylacetate) or with aromatic hydrocarbons (e.g. Solvesso® 100, xylene).

If Basonat® HI polyisocyanates are diluted to a polyisocyanate fraction of less than 40%, turbidity, flocculation and/or sedimentation may occur during storage. Storage trials should always be carried out.

Results from long-term weathering tests show, that in most cases gloss retention is better with isocyanurates than with polyisocyanates based on biurets of hexamethylene diisocyanate (Basonat® HB grades). In addition, due to the low viscosity the solid content can be increased when Basonat® HI grades are used instead of Basonat® HB grades.

The theoretical equivalent amount of polyisocyanate required for crosslinking is computed using this formula:

$$\frac{0.075 \times [\text{OH value}] \times [\text{non volatile fraction of OH component}]}{[\text{NCO}]}$$

example: Joncryl® 507

OH value [mg KOH/g polyol on solids]	140
non-volatile fraction (nvf) [%]	80
Basonat® HI 100 , NCO content [%]	22

Dosage rate for 100 g Joncryl® 507 as supplied is 38.2 g of Basonat® HI 100.

Solvents, pigments or extenders etc. used, should be free from compounds containing active hydrogen groups, e.g. water, alcohols or amines.

A water content of less than 500 ppm in solvents and binders is recommended for 2K polyurethane lacquers.

Storage and Transportation:

STORAGE: It is recommended to store in a dry and cool area with proper ventilation.

Packaging:

200KG/drum Please fasten the packaging cover as soon as possible after original packaging to prevent the mixing of other substances such as moisture and other substances that may affect the performance of the product. Do not inhale dust, avoid skin and mucous membrane contact. Smoking, eating and drinking are prohibited in the workplace. After work, shower and change clothes. Store contaminated clothes separately and reuse them after washing. Maintain good hygiene practices.

E_mail us : info@allhdi.com