

# Basonat<sup>®</sup> HI 2000 NG

## General

Basonat<sup>®</sup> HI 2000 NG is an aliphatic low viscous isocyanurate for lightfast and weather-resistant 2K polyurethane coatings.

## Key features & benefits

solvent free  
low viscosity  
HDI based isocyanate trimer  
high weather resistance  
good light fastness

## Chemical nature

isocyanurate based on Hexamethylenediisocyanate (HDI)

## Properties

### Appearance

transparent low viscous liquid

### Typical characteristics

*(should not be interpreted as specifications)*

NCO content	22.5 - 23.5 %
NCO equivalent weight	~ 182
viscosity at 23°C (73°F), D=1,000s <sup>-1</sup>	900 - 1,500 mPa.s
platin cobalt color number (Hazen)	≤ 60

## Application

Basonat<sup>®</sup> HI 2000 NG is a low viscous, solvent free isocyanurate trimer.

Basonat<sup>®</sup> HI 2000 NG shows excellent color drift in refinish hardener formulations.

Combined with conventional acrylic resins, a solid content approx. 3% higher than with Basonat<sup>®</sup> HI 100 NG can be achieved. Using high-solids binders such as Joncryl<sup>®</sup> polyol grades allows the solids content to be increased even further.

Basonat<sup>®</sup> HI 2000 NG 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<sup>®</sup> HI grades are used to formulate particularly lightfast and weather-resistant coatings.

Basonat<sup>®</sup> HI polyisocyanates are used to crosslink most hydroxy group containing resins, e.g. acrylate resins like the Joncryl<sup>®</sup> Polyols and hydroxy polyesters like the hyperbranched Basonat<sup>®</sup> HPE Polyesters. 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. methoxypropyl acetate) or with aromatic hydrocarbons (e.g. Solvesso®<sup>1</sup> 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 (ncf) [%]	80
Basonat® HI 2000 NG, NCO content [%]	23

Dosage rate for 100 g Joncryl® 507 as supplied is 36.5 g of Basonat® HI 2000 NG.

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.

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## Storage

Basonat® HI 2000 NG is sensitive to moisture. The ideal temperature range for storage is 10-30 °C (50-86 °F) and under airtight conditions (exclusion of humidity and atmospheric oxygen).

Containers should be flushed with nitrogen before resealing.

For further detailed application information please contact our Technical Support Department.

### Safety

When handling this product, please comply with the advice and information given in the safety data sheet and observe protective and workplace hygiene measures adequate for handling chemicals.

### Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. The agreed contractual quality of the product results exclusively from the statements made in the product specification. It is the responsibility of the recipient of our product to ensure that any proprietary rights and existing laws and legislation are observed.

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