

# Basonat<sup>®</sup> HB 275 B CN

## General

Basonat<sup>®</sup> HB 275 B CN is an aliphatic polyisocyanates solved 75% in n-butyl acetate for lightfast and weather-resistant 2K polyurethane coatings.

## Key features & benefits

75% in n-butyl acetate  
Diluted version of a biuret oligomer  
High weather resistance  
Good light fastness

## Chemical nature

Biuret of polyisocyanates based on Hexamethylene diisocyanate (HDI)

## Properties

### Appearance

liquid

### Typical characteristics

(no supply specifications)

NCO content	DIN EN ISO 11909	16-17 %
NCO equivalent weight		~255
Non-volatile fraction	DIN EN ISO 3251	74 - 76%
Viscosity at 23 °C (73 °F) D = 1,000 s <sup>-1</sup>	DIN EN ISO 3219	130 - 300 mPa.s
Platin cobalt color number (Hazen)	DIN EN ISO 6271	≤ 30

The NCO equivalent weight indicates the amount of Basonat<sup>®</sup> polyisocyanate as supplied containing 1 Mol of active NCO.

## Application

Basonat<sup>®</sup> HB 275 B CN is a 75% solution of a biuret oligomer in n-butyl acetate.

Basonat<sup>®</sup> HB polyisocyanates are used to formulate particularly lightfast and weather-resistant coatings. It is also used in primers for difficult substrates such as aluminum or various plastic substrates.

Basonat<sup>®</sup> HB biuret are preferred to improve adhesion to various substrates, the coatings elasticity and to increase hydrophobicity to improve hydrolysis stability.

Basonat<sup>®</sup> HB 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 Basonol<sup>®</sup> HPE Polyesters. Sufficient compatibility with polyester resins containing hydroxyl groups is not always given.

## Formulation Guidelines

Basonat® HB 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® HB 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:

$$\frac{0.075 \times (\text{OH Value}) \times (\text{Non-volatile of OH component})}{(\text{NCO})}$$

Example: Joncryl® 507

OH Value (mg KOH/g polyol on solids)	140
Non-volatile (nvf) (%)	80
Basonat® HB 275 B, NCO content (%)	16.5

$$\frac{0.075 \times 140 \times 80}{16.5} = 50.9$$

Dosage rate for 100 g Joncryl® 507 as supplied is 50.9 g of Basonat® HB 275 B CN.

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.

<sup>1</sup> registered trademark of Exxon Mobil Corporation

## Storage

Basonat® HB 275 B CN 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.

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**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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