# Basonat® HB 175 MP/X CN

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| **General** | Basonat® HB 175 MP/X CN is an aliphatic polyisocyanate for lightfast and weather-resistant two-pack polyurethane coatings. It is an approximately 75% solids solution in a 1:1 blend of 1-methoxy-2- propyl acetate and xylene. |
| **Key features & benefits** | Excellent weather and chemical resistance<br>Excellent physical properties<br>Non-yellowing |
| **Chemical nature** | Polyisocyanate based on biuret-modified hexamethylene diisocyanate (HDI) |

## Properties

**Appearance** viscous liquid

**Typical characteristics**
*(no supply specifications)*

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| NCO content | 16-17 % |
| Non-volatile fraction | 74 - 76% |
| Viscosity at 23 °C (73 °F) D = 1,000 $s^{-1}$ | 130 - 300 mPa.s |
| Platin cobalt color number (Hazen) | ≤ 30 |
| NCO equivalent weight | ~ 255 |

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

## Application

Basonat® HB 175 MP/X CN is a 75% solution of a biuret oligomer in methoxypropyl acetate 1:1 xylene.

Basonat® HB 175 MP/X CN 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® 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® HB Biuret are preferred to improve adhesion to various substrates, the coatings elasticity and to increase hydrophobicity to improve hydrolysis stability.

Basonat® HB 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 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®[1] 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.

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 175 MP/X, 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 175 MP/X 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.

*1 registered trademark of Exxon Mobil Corporation*

# Storage

Basonat® HB 175 MP/X 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.

**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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