# Industrial Coatings

Technical Data Sheet

# Basonat® HB 175 MP/X

BASF
The Chemical Company

***Product Description***

**Basonat® HB 175 MP/X 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***
***- Excellent physical properties***
***- Non yellowing***

***Chemical Composition***

**Polyisocyanate based on biuret-modified hexamethylene diisocyanate (HDI)**

## Properties

***Typical Characteristics***

| | |
|---|---|
| Appearance | liquid |
| Non-volatile | 74 – 76% |
| Viscosity at 23°C | 130 – 300 cps |
| Shear rate D | 1,000 $s^{-1}$ |
| Hazen color number | ≤ 30 |
| Density at 20°C | 1.07 $g/cm^3$, 8.93 lbs/gal |
| NCO content | 16 – 17% |
| NCO equivalent weight (as supplied) | ~ 255 |

***Crosslinking***

Used to crosslink most hydroxy-containing resins such as Joncryl® acrylics and hydroxy functional polyesters.

***Diluent tolerance***

Can be diluted with esters, ketones, glycolether acetates or with aromatic hydrocarbons. Only urethane-grade solvents should be used to lessen the possibility of reacting with water.

If diluted to a polyisocyanate fraction of less than 40%, turbidity, flocculation, and/or sedimentation may occur during storage. Storage trials should always be conducted.

These typical values should not be interpreted as specifications.

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

## Applications

Basonat® HB 175 MP/X is used to formulate lightfast and weather-resistant coatings. Aliphatic polyisocyanates are sometimes even used in primers for difficult substrates such as aluminum or plastics.

Basonat® HB 175 MP/X is recommended for applications such as:

- Interior/exterior general industrial metal coating applications
- Interior/exterior plastic component coating applications
- Interior/exterior wood coatings for floor, furniture, or millwork applications
- Interior/exterior Automotive OEM or refinish applications

***Processing***

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

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

***Example***

Basonat® HB 175 MP/X and Joncryl® 922

Joncryl® 922

| | |
|---|---|
| OH number | 140 mg KOH/g polyol on solids |
| Non-volatile fraction, Nv | 80% |
| NCO content (Basonat® HB 175MP/X) | 16.5% |

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

Basonat® HB 175 MP/X dosage rate for 100g Joncryl® 922 as supplied = 50.9g.

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

A water content of less than 500 ppm in solvents and binders in two-component polyurethane coatings is acceptable.

## Safety

***General***

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State, and Local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

***Material Safety Data Sheet***

All safety information is provided in the Material Safety Data Sheet for Basonat® HB 175 MP/X.

## Important

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