

# Basonat<sup>®</sup> HW 1000

<b>Product Description</b>	Basonat HW 1000 is a water-emulsifiable, solvent-free, aliphatic polyisocyanate for crosslinking hydroxyl functional emulsions.
<b>Key Features &amp; Benefits</b>	<ul style="list-style-type: none"><li>- Excellent weather and chemical resistance</li><li>- Excellent adhesion to various substrates</li><li>- Easily emulsifiable in water</li><li>- Low VOC</li></ul>
<b>Chemical Composition</b>	Emulsifier-modified polyisocyanate based on isocyanurated hexamethylene diisocyanate (HDI)

## Properties

<b>Typical Characteristics</b>	Appearance		liquid
	Viscosity at 23°C (73°F)	cps	2,000 – 6,000
	Shear rate D	s <sup>-1</sup>	100
	Hazen color number		≤ 100
	Density at 20°C	g/cm <sup>3</sup> , lbs/gal	1.17, 9.76
	NCO content	%	16.5 – 17.5
	NCO equivalent weight		~ 247

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

These values should not be interpreted as specifications.

## Applications

Basonat HW 1000 is used as a crosslinker for polymeric dispersions containing reactive OH groups.

Basonat HW 1000 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

Basonat HW 1000 can be directly incorporated into the formulated dispersion. Due to the reaction of a polyisocyanate with water, the OH and NCO groups cannot be expected to react stoichiometrically.

Generally, adding 10 – 20 parts of Basonat HW 1000 to 100 parts of primary acrylic emulsion (solids on solids) is sufficient. The optimum dosage rate for the application is usually determined empirically.

For secondary emulsions, a stoichiometric ratio of 150 parts of polyisocyanate to 100 parts of polyol (index 150) is used. Basonat HW 1000 can be mixed with many low viscosity polyisocyanates such as Basonat HA 1000.

For easier incorporation, Basonat HW 1000 can be dissolved first in 10 – 30% of the solvent that is used as the film forming agent for the dispersion, such as butyl glycol acetate, butyl diglycol acetate, or methoxypropyl acetate.

When formulating coatings, care should be taken that solvents, additives, and gelling agents do not react with isocyanate groups as any substances containing active hydrogen groups should be avoided.

Tertiary amines such as dimethylethanolamine, triethylamine, and triethanolamine can be used to adjust pH values. The pH value of the formulation decisively influences the pot life - the higher the pH, the shorter the pot life. A pH > 7 promotes the reaction of polyisocyanate with water and amine.

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## **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 practices, and wearing of protective goggles.

### **Safety Data Sheet**

All safety information is provided in the Safety Data Sheet for Basonat HW 1000.

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## **Storage**

Please refer to the “Handling and Storage of Polymer Dispersion” brochure

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## Important

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