

Industrial Coatings

Technical Data Sheet

Basonat[®] HW 180 PC



| | |
|------------------------------------|---|
| Product Description | Basonat [®] HW 180 PC is a water-emulsifiable, solvent-free, aliphatic polyisocyanate for crosslinking polymeric dispersions. It is an approximately 80% solids solution in propylene carbonate. |
| Key Features & Benefits | <ul style="list-style-type: none">- Excellent weather and chemical resistance- Excellent adhesion to various substrates- Easily emulsifiable in water- Low VOC |
| Chemical Composition | Emulsifier-modified polyisocyanate based on isocyanurate-modified hexamethylene diisocyanate (HDI) |

Properties

| | | |
|--------------------------------|-------------------------------------|---------------------------------------|
| Typical Characteristics | Appearance | liquid |
| | Non-volatile | 79 – 81% |
| | Viscosity at 23°C | 450 – 850 cps |
| | Shear rate D | 100 s ⁻¹ |
| | Hazen color number | ≤ 100 |
| | Density at 20°C | 1.18 g/cm ³ , 9.85 lbs/gal |
| | NCO content (as supplied) | 13 – 14% |
| | NCO equivalent weight (as supplied) | ~ 312 |

These typical values should not be interpreted as specifications.

Applications

Basonat[®] HW 180 PC is used as a crosslinker for polymeric dispersions containing reactive OH groups.

Basonat[®] HW 180 PC 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 180 PC can be directly incorporated into the formulated dispersion. Since Basonat[®] HW 180 PC reacts with water and its inaccessibility of OH functionality due to steric hinderance; it normally does not react stoichiometrically.

Generally, adding 10 – 20 parts of Basonat[®] HW 180 PC to 100 parts of primary acrylic emulsion (solids on solids) is sufficient. The optimum dosage rate for the application is usually determined experimentally.

For secondary emulsions, a stoichiometric ratio of 150 parts of polyisocyanate to 100 parts of polyol (index 1.5:1) is used. Basonat[®] HW 180 PC can be mixed with many low viscosity polyisocyanates.

For easier incorporation, Basonat® HW 180 PC can be dissolved first in 10 – 30% of the solvent that is used as the film forming agent for the dispersion (e.g. butyl glycol acetate, butyl diglycol acetate, methoxypropyl acetate, dipropylene glycol dimethyl ether) before use.

When formulating coatings, care should be taken that film forming agents (e.g. solvents), additives, and gelling agents do not react with isocyanate groups, i.e. any substances containing active hydrogen groups should be avoided.

Tertiary amines such as dimethylethanolamine, triethylamine, and triethanolamine can be used to adjust the 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. Optimum pH in most formulations is between 7 and 8.5.

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® HW 180 PC.

Important

While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, they are provided for guidance only. Because many factors may affect processing or application/use, BASF recommends that the reader make tests to determine the suitability of a product for a particular purpose prior to use. **NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESCRIPTIONS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS.** In no case shall the descriptions, information, data or designs provided be considered a part of BASF's terms and conditions of sale. Further, the descriptions, designs, data, and information furnished by BASF hereunder are given gratis and BASF assumes no obligation or liability for the descriptions, designs, data or information given or results obtained all such being given and accepted at the reader's risk.

Basonat is a registered trademark of BASF Group.

© BASF Corporation, 2010



BASF Corporation is fully committed to the Responsible Care® initiative in the USA, Canada, and Mexico.

For more information on Responsible Care® goto:

U.S.: www.basf.us/responsiblecare_usa

Canada: www.basf.us/responsiblecare_canada

México: www.basf.us/responsiblecare_mexico

U.S. & Canada

BASF Corporation
1609 Biddle Avenue
Wyandotte, Michigan 48192
Phone: (800) 231 – 7868
Fax: (800) 392-7429
Email: polyorders@basf.com
Email: edtech_info@basf.com
www.basf.com

Mexico

BASF Mexicana, S.A. de C.V.
Av. Insurgentes Sur # 975
Col. Ciudad de los Deportes
C.P. 03710
Mexico, D.F.
Phone: (52-55) 53-25-27-87
(52-55) 53-25-26-87
Fax: (52-55) 56-11-48-97