

PHENOXY PK™ HW-38 Waterborne Dispersion

Product Description

PHENOXY PK™ HW-38 dispersion is a waterborne, anionically-stabilized, colloidal dispersion of PHENOXY™ resin PKHC designed for thermoset coatings and adhesives. The dispersion is a low viscosity non-Newtonian fluid at room temperature.

PHENOXY™ resins (polyhydroxyethers) are tough, ductile, amorphous, thermoplastic polymers having excellent thermal stability, adhesive strength, and vapor barrier properties. PHENOXY™ resins may be crosslinked by reacting its hydroxyl functional groups with isocyanates, melamine resins, or phenolic resins. Crosslinked PHENOXY™ resins exhibit excellent chemical resistance, hardness, and adhesion on many substrates including steel, aluminum, glass, carbon fibers, and plastics such as nylon and polyester (PET). The recommended level of crosslinking range from 5 to 20 phr based on resin solids.

Applications

- Thermoset Waterborne Coatings
- Plural Component Coatings and Adhesives
- Inks

Specified Key Properties

Property	Value
Solids	37 - 39 %
Viscosity at 25 °C	<800 cP
pH	6.8 - 7.8
VOC Content	5 - 7 %
Triethylamine	1 - 3 %

Processing

PHENOXY PK™ HW-35 is compatible with most waterborne polyurethanes and acrylics at pH's greater than 6.5. PKHW-38 is incompatible with acidic materials; low pH media can cause loss of dispersibility and precipitation of the base resin.

The addition of PKWH-38 to ambient cure 2k waterborne formulations can improve ultimate film hardness, shorten dry-to-touch times, and improve gloss. Physical properties can be further enhanced with the use of ambient-cure crosslinkers such as aliphatic isocyanates, carbodiimides, polyaziridines, and epoxy silanes. Crosslinkers such as alkylated phenolics and melamine's are readily dispersed in PKHW-38 to provide shelf-stable, single pack, thermoset formulations. All properly formulated coatings of PKHW-38 display excellent flexibility and surface hardness. PKHW-38 typically contains less than 8% by weight volatile organic compounds (VOC's) and triethylamine.

Regulatory Status

TSCA (USA), DSL (Canada), PICCS (Philippines), AICS (Australia), ENCS/MITI (Japan), IECSC (China). Polymer Exempt: EINECS (EU)

Storage

PHENOXY PK™ HW-38 should be stored in a dry place, in its sealed original container, at temperatures between **0°C - 40°C (32°F - 104°F)**. Under these storage conditions the shelf life is **12 months** from date of manufacture. The product should not be exposed to direct sunlight.

Precautionary Statement

Huntsman Advanced Materials Americas LLC maintains up-to-date Safety Data Sheets (SDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

First Aid!

Refer to SDS as mentioned above.

KEEP OUT OF REACH OF CHILDREN

FOR PROFESSIONAL AND INDUSTRIAL USE ONLY

Important Legal Notice

Sales of the product described herein ("Product") are subject to the general terms and conditions of sale of either Huntsman Advanced Materials LLC, or its appropriate affiliate including without limitation Huntsman Advanced Materials (Europe) BVBA, Huntsman Advanced Materials Americas LLC, or Huntsman Advanced Materials (Hong Kong) Ltd. ("Huntsman"). The following supercedes Buyer's documents.

Huntsman warrants that at the time and place of delivery all Products sold to Buyer shall conform to the specifications provided to Buyer by Huntsman, if any.

While the information and recommendations included in this publication are, to the best of Huntsman's knowledge, accurate as of the date of publication, NOTHING CONTAINED HEREIN (EXCEPT AS SET FORTH ABOVE REGARDING CONFORMANCE WITH SPECIFICATIONS PROVIDED TO BUYER BY HUNTSMAN) IS TO BE CONSTRUED AS A REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS, OR WARRANTIES AS TO QUALITY OR CORRESPONDENCE WITH PRIOR DESCRIPTION OR SAMPLE, AND THE BUYER ASSUMES ALL RISK AND LIABILITY WHATSOEVER RESULTING FROM THE USE OF SUCH PRODUCT, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER SUBSTANCES.

No statements or recommendations made herein are to be construed as a representation about the suitability of any Product for the particular application of Buyer or user or as an inducement to infringe any patent or other intellectual property right. Buyer is responsible to determine the applicability of such information and recommendations and the suitability of any Product for its own particular purpose, and to ensure that its intended use of the Product does not infringe any intellectual property rights.

The Product may be or become hazardous. The Buyer should obtain Material Safety Data Sheets and Technical Data Sheets from Huntsman containing detailed information on Product hazards and toxicity, together with proper shipping, handling and storage procedures for the Product, and should comply with all applicable governmental laws, regulations and standards relating to the handling, use, storage, distribution and disposal of, and exposure to the Product. Buyer shall also take all steps necessary to adequately inform, warn and familiarize its employees, agents, direct and indirect customers and contractors who may handle or be exposed to the Product of all hazards pertaining to and proper procedures for safe handling, use, storage, transportation and disposal of and exposure to the Product, and the containers or equipment in which the Product may be handled, shipped or stored.

PHENOXY PK™ is a trademark of Huntsman Corporation or an affiliate thereof in one or more, but not all countries.

© 2021 Huntsman Advanced Materials Inc.

Main Offices:

Huntsman Corporation
10003 Woodloch Forest Dr
The Woodlands, TX 77380
888-564-9318

Huntsman Advanced Technology Center
8600 Gosling Rd.
The Woodlands, TX 77381
281-719-7400