

PHENOXY PK™ HW-35 Waterborne Dispersion

Product Description

PHENOXY PK™ HW-35 dispersion is a waterborne, anionically-stabilized, colloidal dispersion of PHENOXY™ resin PKHH designed for thermoset coatings and adhesives. The dispersion is a non-Newtonian fluid at room temperature and exhibits very slight thixotropic behavior.

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
- Thermoset Waterborne Coatings
- Plural Component Coatings and Adhesives
- Glass Fiber Sizing

Specified Key Properties

| Property | Value |
|--------------------------|------------------|
| Solids | 30 - 32 % |
| Viscosity at 25 °C | 1,000 - 4,000 cP |
| pH | 6.8 - 7.8 |
| VOC Content | 8 - 10 % |
| N,N-dimethylethanolamine | 2.5 - 3.5 % |

Processing

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

The addition of PKHW-35 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-35 to provide shelf-stable, single pack, thermoset formulations. All properly formulated coatings of PKHW-35 display excellent flexibility and surface hardness. PKHW-35 typically contains less than 12% by weight volatile organic compounds (VOC's) including non-HAP ethylene glycol butyl ether (butyl cellosolve, Glycol Ether EB) and dimethylethanolamine

Regulatory Status

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

Storage

PHENOXY PK™ HW-35 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

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