

Advanced Materials

Phenoxy PK™HW-38[#]

CATINGS INDUSTRY SYSTEMS

DATA SHEET

Phenoxy PK™HW-38 is a waterborne anionically-stabilized colloidal dispersion of phenoxy resin Phenoxy PK™HC designed for thermoset coatings and adhesives.																																																			
Applications	<ul style="list-style-type: none">• Thermoset Waterborne Coatings• Plural Component Coatings and Adhesives• Glass Fiber Sizing																																																		
Properties	<p>Phenoxy PK™HW-38 is a waterborne anionically-stabilized colloidal dispersion of phenoxy resin Phenoxy PK™HC designed for thermoset coatings and adhesives. The dispersion is a low viscosity non-Newtonian fluid at room temperature.</p> <p>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.</p> <p>Phenoxy PK™HW-38 is compatible with most waterborne polyurethanes and acrylics at pH's greater than 6.5. Phenoxy PK™HW-38 is incompatible with acidic materials; low pH media can cause loss of dispersibility and precipitation of the base resin.</p> <p>The addition of Phenoxy PK™HW-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 Phenoxy PK™HW-38 to provide shelf-stable, single pack, thermoset formulations. All properly formulated coatings of Phenoxy PK™HW-38 display excellent flexibility and surface hardness.</p>																																																		
Key data	<table><tr><td colspan="4">Specified key data</td></tr><tr><td>Non-Volatiles</td><td>37-39</td><td></td><td>[%]</td></tr><tr><td>Viscosity @ 25 °C</td><td><800</td><td></td><td>[mPa s]</td></tr><tr><td>pH</td><td>6.8 – 7.8</td><td></td><td></td></tr><tr><td>VOC Content</td><td>5 – 7</td><td></td><td>[%]</td></tr><tr><td>Triethylamine</td><td>1 - 3</td><td></td><td>[%]</td></tr><tr><td colspan="4">Specified key data are individually checked throughout and guaranteed.</td></tr><tr><td colspan="4">Typical key data</td></tr><tr><td>OH Equivalent Weight (solids basis)</td><td>410-420</td><td></td><td>[g/equiv.]</td></tr><tr><td>Average Particle size</td><td>0.45</td><td></td><td>[µm]</td></tr><tr><td>As-supplied form</td><td colspan="3">colloidal dispersion</td></tr><tr><td>Shelf life (at storage temperature between 2 - 40 °C)</td><td colspan="3">1 year</td></tr></table>			Specified key data				Non-Volatiles	37-39		[%]	Viscosity @ 25 °C	<800		[mPa s]	pH	6.8 – 7.8			VOC Content	5 – 7		[%]	Triethylamine	1 - 3		[%]	Specified key data are individually checked throughout and guaranteed.				Typical key data				OH Equivalent Weight (solids basis)	410-420		[g/equiv.]	Average Particle size	0.45		[µm]	As-supplied form	colloidal dispersion			Shelf life (at storage temperature between 2 - 40 °C)	1 year		
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[#] In addition to the brand name product denomination may show different appendices, which allows us to differentiate between our production sites: e.g. BD = Germany, US = United States, IN = India, CI = China, etc. These appendices are in use on packaging, transport and invoicing documents. Generally the same specifications apply for all versions. Please address any additional need for clarification to the appropriate Huntsman contact.

(see expiry date on original container)

Hazardous decomposition products
(when disposed of in fire)

carbon monoxide, carbon
dioxide, nitrogen oxides and
other toxic gases and vapours

Disposal

regular procedures approved by
local authorities

Typical key data are spot checked; the values are typical for the product and are indicated for information only. The values are not guaranteed.

Storage

Phenoxy PK™HW-38 should be stored in a dry place, preferably in the sealed original container, at temperatures between 2 and 40 °C (temperatures will never be allowed to drop under 0°C). The product should not be stored exposed to direct sunlight.

Handling precautions

Mandatory and recommended industrial hygiene procedures should be followed whenever our products are being handled and processed. For additional information please consult the corresponding product safety data sheets.

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