Product Datasheet

SP&S Specialty Polymers and Services

Hardener H940

POLYAMIDE CURING AGENT FOR EPOXY RESINS

Hardener H940 is is a low viscosity reactive polyamide, high imidazoline, moderate molecular weight epoxy curing agent based on dimerized fatty acid and polyamines. Epoxy resin compatibility and thin film curing properties are very good.

The EpoPro 230 resin is available in a standard clear to very light yellow color or in custom colors. Many other custom variations are available including toughened or flexibilized versions, accelerated versions offering shorter cure times, and many other modification designed to suit your application or production process. Please contact us to discuss your application if you'd like to receive samples of a custom variant that would be suitable for your application.

SUGGESTED APPLICATIONS:

- Good chemical and corrosion resistance
- Good water resistance
- Good pigment and substrate wetting
- Good adhesion

HANDLING PROPERTIES	VALUE	TEST METHOD
Hardener H940		
Visual Appearance	amber viscous liquid	
Specific Gravity	0.98 g/cm³	ASTM E-201
Viscosity, Part A, @ 25ºC	13,000 cps	ASTM D-2393
Viscosity, Part A, @ 40ºC	3,500 cps	ASTM D-2393
Flash Point	>110°C	ASTM D-92
Amine Value	360-390	
Amine Equivalent Weight	95	
Mix ratio wit 190 EEW Epoxy resin	50 – 150 parts by weight	

CURED PHYSICAL PROPERTIES – (Note: these properties will vary with mix ratio and cure temperature. Data below is for 100 parts of Epon 828 or similar resin and 45 parts by weight Hardener H940 (Tested at 25C unless otherwise noted & cured 4 hours @ 150C)

		TEST METHOD
Appearance	Clear amber	Visual
Hardness, Shore D	85D	ASTM D-2240
Tensile Strength	8,300 psi	ASTM D-638
Tensile Elongation	4.5%	ASTM D-638
Tensile Modulus	420,000 psi	ASTM D-638
Flexural Strength	14,000 psi	
Flexural Modulus	310,000 psi	

Compressive Yield Strength	33,000	
Heat Deflection Temperature	98ºC	
Moisture absorption (24 hour immersion - % weight gain)	0.18%	ASTM D-570
Thermal Conductivity	0.18 W/mK	ASTM D-2214
Volume Resistivity (ohm-cm)	1.0×10^{16}	Mil-I-46058C
Dielectric Strength (V/mil)	400	ASTM D-149
Dielectric Constant @ 1 MHz	3.61	ASTM D-150
Dissipation Factor @ 1 MHz	0.02	ASTM D-150

NOTE : Values are based on laboratory or average production results – not for specification purposes. For properties expected with other mix ratio or cure cycles please contact SP&S or review technical datasheets for the resin/hardener combination that is of interest.

PACKAGING AVIALABLE:

This product is available in a wide range of package sizes including quarts, gallons, 5-gallons pails, and 55-gallon drums. It can also be supplied in squeeze bottles or syringes on request.

STORAGE GUIDELINES:

Hardener H940 should be kept in tightly closed containers in a cool, dry place. Product will absorb moisture and carbon dioxide which may affect viscosity or create foaming. Protect from extended exposure to temperatures below 10ºC (50ºF) to prevent crystallization. If crystallization occurs, heat the entire container for at least 4 hours at 60ºC to re-liquefy the material. Tightly re-seal containers after use. If the recommended storage conditions are observed the products will have a minimum shelf-life of 3 years from the date of shipment.

HANDLING PRECAUTIONS:

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

PERSONAL HYGIENE:

Hardener H940

CAUTION! May cause eye & skin irritation. Prolonged or repeated skin contact or inhalation of vapors may cause allergic skin or respiratory reactions. Harmful if inhaled or swallowed. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation. Do not take internally.

FIRST AID

In case of contact:

Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.

Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.

Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER:

IMPORTANT: The following supercedes Buyer's documents. **SELLER / MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE**. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller / Manufacturer be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results presented are based on controlled or laboratory work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended

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