HETRON 922

Technical Datasheet

PRODUCT CODE: C260009

CORROSION RESISTANT, EPOXY VINYL ESTER

HETRON® 922 Epoxy Vinyl Ester resin is a low viscosity, unpromoted epoxy vinyl ester which has a proven record of performance in area's requiring a high degree of toughness and excellent chemical resistance. It was the first Vinyl Ester introduced to the United States in 1964 where it is still known by its' original Shell Chemical Company name. (Epocryl 322).

PERFORMANCE CHARACTERISTICS

- Excellent corrosion resistance
- Excellent impact strength
- High tensile elongation
- No foaming
- Exotherm control
- Industry-leading storage stability

SUGGESTED USES

Equipment required to meet the Australian Potable Water standard. Corrosion resistant tanks, pipes, vats, process vessels, pumps, scrubbers, and other equipment. Also suitable for flake-glass or fibreglass reinforced linings, coatings and monolithic toppings on tanks, vats, floors, troughs, and similar applications.

RELATED PRODUCTS

C260011 - Hetron 922 PAS	Promoted version for summer conditions
C260012 - Hetron 922 PAW	Promoted version for winter conditions
C260013 - Hetron FR922	Fire retardant version

HETRON® 922PAS and HETRON® 922PAW are now part of the comprehensive range of Ashland Chemical Co. corrosion resistant Polyesters and Vinyl Esters made locally under license by Allnex Composites.

HETRON® 922PAS/PAW are promoted, wax free, thixotroped Vinyl Ester resins developed for excellent performance in most corrosion and chemical resistance applications. Selection of the correct resin for the environment is very important and reference should be made to the current version of the Ashland publication -"HETRON® and AROPOL™ Resin Selection Guide", in conjunction with Allnex Composites Technical Service staff.

HETRON® 922PAS/PAW offer a broad resistance to a wide variety of corrosive environments. Due to the thixotropic content, it is not suitable for applications where strong oxidising agents are present ie: Sodium Hypochlorite, Hydrofluoric Acid, etc. For optimum chemical resistance the non-thixotropic resin, HETRON® 922 should be used in the corrosion layer of the laminate. In most cases the structural layer of the corrosion resistant laminate can be completed with HETRON® 922PAS/PAW.

TYPICAL LIQUID RESIN PROPERTIES @ 25°C

PROPERTY	CONDITIONS	TYPICAL VALUE
Appearance	Ambient	Pale Amber Liquid
Gardner Colour		<4
Viscosity	Brookfield LVT#2/30 @25°C	700 – 1000cP
Geltime	(using 0.3% of 6% Cobalt Octoate, 0.1% DMA & 1.24ml/100g CUROX M100 @25°C)	5 – 14 minutes
Peak Exotherm	(using 0.3% of 6% Cobalt Octoate, 0.1% DMA & 1.24ml/100g CUROX M100 @25°C)	140 – 160°C
Time to Peak	(using 0.3% of 6% Cobalt Octoate, 0.1% DMA & 1.24ml/100g CUROX M100 @25°C)	8 – 16 minutes
Density		1.05g/m^3
Flashpoint	Setaflash	31°C
Volatile Content		39 – 43%
Shelf Life	Stored under appropriate conditions at 25°C	3 Months

Typical values: Based on materials tested in our laboratories, but varies from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

TYPICAL CAST UNFILLED RESIN PROPERTIES

PROPERTY	TYPICAL VALUE	CONDITIONS
Hardness	30	Barcol (GYZ 934-1) EN 59
Density	1.12g/m^3	ISO R1183
Tensile Strength	85 MPa	ISO R527
Flexural Strength	140 MPa	ISO 178
Flexural Modulus	3.4 GPa	ISO 178
Elongation at break	6.7%	ISO R527
Heat Deflection	105^{0}C	ISO 175 (1.8 MPa)

Cast resin was prepared using 1%BPO and post-cured for two hours at 70°C followed by one hour at 90°C and two hours at 140°C

POSTCURING THE LAMINATE

Post curing is recommended for maximum chemical and heat resistance.

For a service temperature below 100°C, A postcure may extend the service life if the operating temperature is within 20°C of the present CR guide maximum temperature for the service. This means that a postcure can be beneficial for solvent applications with a temperature limit of 25°- 40°C.

For service temperature above 100°C, Postcure in service may be sufficient, provided the resin specific minimum Barcol hardness values are reached before start up.

For service in pure and neutral salt solutions, In general postcure may not be required, provided the resin specific minimum Barcol hardness values are reached and no acetone sensitivity is shown before start up. When using a BPO / Amine cure system, postcure is strongly recommended and should be done within two weeks of construction. Postcure conditions as outlined in EN 13121-2 are recommended. Minimum recommended postcure conditions are 80°C for four hours.

STORAGE AND HANDLING

To ensure maximum stability and maintain optimum resin handling properties, polyester resins should be stored in closed containers, away from heat sources and sunlight. The resin should be stored away from all sources of ignition. Stored resin quantities should be kept to a reasonable minimum and used on a first in/first out stock rotation basis. Prolonged storage, or unfavourable storing conditions, may cause separation, therefore agitation of the resin before use is recommended.

STANDARD PACKAGING

Mild steel drums (Open Head)

Always refer to the MSDS before use