

SWANCOR 2216-A/B

epoxy resin system for filament winding application



Product Description

SWANCOR 2216-A/B is two-component epoxy system. It has excellent pot life with low viscosity and also quick cure rate at elevated temperatures.

Applications

These features coupled with excellent adhesion to several reinforcement including glass and carbon fiber make it excellent choice for filament winding applications.

Fabrication Methods

Filament winding applications

Typical properties of liquid resin

A. Resin properties

Items	2216-A	2216-B
Viscosity (cps, 25°C)	200~600	200~600
Viscosity of mixed	200~600	
A/B ratio (weight)	100 : 150	
Tg	210~220	
Gel time (hours, 25°C)	>24	
Gel time (mins, 150°C)	1-3	

B. Mechanical properties

Items	2216-A/B	Standard
Tensile Strength (Mpa)	50~60	ASTM D 638 or ISO 527
Tensile Modulus (Mpa)	2,500~3,000	ASTM D 638 or ISO 527
Elongation of Break (%)	3~5	ASTM D 638 or ISO 527
Flexural Strength (Mpa)	100~110	ASTM D 790 or ISO 178
Flexural Modulus (Mpa)	2,500~3,000	ASTM D 790 or ISO 178
Tg (°C)	210~220	DSC 10°C/min
HDT (°C)	215~225	ASTM D 648 or ISO 75-2

Cure condition : post cure at 95°C*1hou +
120°C*1hou + 150°C*1hou + 180°C*1hou

C. Electrical properties

Items	2216-A/B	Standard
Dielectric strength (KV/mm, 25°C)	>25	IEC 60243-1
volume resistivity (Ω/cm, 25°C)	10 ¹⁵ ~10 ¹⁶	IEC 60093
Dielectric constant (1 Meg Hz, 25°C)	3~3.3	IEC 56250
Dissipation factor (1 Meg Hz, 25°C)	0.01~0.03	IEC 56250

RESIN STORAGE

- The epoxy resin should retain its chemical properties for at least 12 months when stored in a dry place in its original closed packaging between 25°C and 35°C
- The hardener should retain its chemical properties for at least 12 months when stored in their original closed packaging, in a cool, dry environment, away from direct sunlight and at a temperature not over 25°C. If possible, provide nitrogen padding in the headspace of opened containers and bulk storage facilities.
- Hardeners are hygroscopic and will absorb moisture and carbon dioxide from the atmosphere if not stored properly. Be sure to close containers immediately after use. The absorption of moisture and/or carbon dioxide will affect the chemical behavior of the material and the performance properties of the final product.

PACKAGE

- Epoxy Resin is supplied in 20Kg steel drum.
- Epoxy Resin is supplied in 200Kg steel drum.
- Hardeners are supplied in 20Kg plastics drum.
- Hardeners are supplied in 200Kg galvanized iron drum.

The data presented herein are believed to be accurate and reliable. We require customers to inspect and test our product before use and to satisfy themselves as to contents and suitability for their specific applications. Information herein is to assist customers in determining whether our products are suitable for their applications but not to be taken as a guarantee, express warranty or implied warranty of merchantability or fitness for particular purpose, nor is any protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is limited to replacement of our material and in no event shall we be liable for special, incidental or consequential damages.