

SWANCOR 2511-1

Infusion Epoxy Resin System



Product Description

SWANCOR 2511-1 is designed for the process of vacuum infusion (SCRIMP or RTM) which is composed of particular epoxy resin and hardener. It is especially suitable for wind blade manufacturing. The major features include low viscosity, long pot life, high HDT and wetting properties with glass fiber and carbon fiber.

Physical Properties

Item	2511-1A	2511-1BT	2511-1BM	2511-1BF	2511-1BS
Appearance	Transparent Liquid	Light Blue	Light Blue	Light Blue	Light Blue
Viscosity (25°C/77°F, cps)	900~1400 (LVT#3-60rpm)	10~25 (LVT#1-60rpm)	5~20 (LVT#1-60rpm)	5~20 (LVT#1-60rpm)	5~20 (LVT#1-60rpm)
Density (25°C/77°F, g/cm ³)	1.10~1.20	0.90~1.00	0.90~1.00	0.90~1.00	0.90~1.00
Flash Point (25°C/77°F)	>150°C/302°F	>120°C/248°F			
Shelf Life (months)	24				
A/B Ratio (weight)	100:30±2				
Initial Mix Viscosity (25°C /77°F, cps)	-	250~350 (LVT#2-60rpm)	200~300 (LVT#2-60rpm)	200~280 (LVT#2-60rpm)	215-255 (LVT#2-60rpm)
Exothermic Peak Time (28°C/82°F, 100g,mins)	-	85~125	170~250	220~300	285-315

Mechanical properties

Item	2511-1A/BT	2511-1A/BM	2511-1A/BF	2511-1A/BS	Method
Tensile Strength (MPa)	75~87	73~84	70~80	67~80	ASTM D638 or ISO 527
Tensile Modulus (MPa)	2,800~3,500	2,900~3,600	2,900~3,600	2,700~3,500	ASTM D638 or ISO 527
Elongation at Break(%)	5.0~8.0	5.0~8.0	5.0~8.0	4.5~8.5	ASTM D638 or ISO 527
Flexural Strength(MPa)	125~155	110~130	110~140	110~140	ASTM D790 or ISO 178
Flexural Modulus(MPa)	2,800~3,600	2,900~3,400	3,000~3,500	2,800~3,600	ASTM D790 or ISO 178
Tg (°C/°F)	85~95/185~203	85~95/185~203	85~95/185~203	80~90/176~194	DSC test ,10°C/50°F, mins
HDT(°C/°F)	76~88/169~190	76~88/169~190	76~88/169~190	72~82/162~180	ASTM D648 or ISO 75-2

Curing condition: 16hours at room temperature then 8 hours at 80°C/176°F .

Packing , storage and handling precaution

1. SWANCOR 2511-1A packed in 265 gallon IBC, weight 1000kg per barrel or 55 gallon barrel, weight 200kg per barrel or 5 gallon barrel, weight 20kg per barrel.
2. SWANCOR 2511-1BT, 2511-1BM, 2511-1BF, 2511-1BS packed in 265 gallon IBC, weight 900kg per barrel or 55 gallon barrel, weight 180kg per barrel or 2.5 gallon barrel, weight 9kg per barrel.
3. The epoxy and hardener have to well mix by regular proportion for use.
4. After epoxy and hardener are mixed, it should be used in valid period, in case it gels and can't be use.
5. All implement for daubing and stowing should be cleansed right after used.
6. Under construction duration, should avoid skin contact, wear protective cloth and glove if necessary.
7. The epoxy and hardener should be kept in the original sealed barrel, the best storage temperature is 15~40°C, avoid direct sunlight, can be stored for 24 months .

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 form 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.