

# SWANCOR 2205-2A/B

epoxy adhesive for composite pipe bonding



## Product Description

SWANCOR 2205-2A/B is a two component, ambient temperature curing paste adhesive. It shows high temperature resistance, up to 100°C and excellent resistance to common chemicals.

## Applications

SWANCOR 2205-2A/B, is used for a wide range of applications, including crude oil conveyance, flow lines, fire water lines, potable water lines, seawater cooling systems, industrial waste and marine and offshore applications. Small packs for convenient handling, which allow the user to accurately deliver a measured quantity of adhesive with minimum wastage.

## Fabrication Methods

Adhesive bonding

## Typical properties of liquid resin

Item	Unit	SWANCOR 2205-2A	SWANCOR 2205-2B
Appearance	-	Yellow paste	White paste
Viscosity (@25°C)	cps	100000~200000	100000~300000
Density (@25°C)	g/cm <sup>3</sup>	1.1~1.3	1.1~1.3
A/B ratio (weight)	-	100 : 50	
Tg <sup>*1</sup>	°C	>140	
Pot life			
25°C /100g	min	15~35	
40°C /100g	min	5~10	
Peak temperature			
25°C /100g	°C	180~250	
40°C /100g	°C	230~300	

\*1 Curing condition : One hour at 125°C

## Typical cured properties

A. FRP-FRP Tensile lap Shear Strength versus temperature

Temperature (°C)	Test result (MPa)	Test method
20	17.16 ± 1.29	ISO 4587
40	14.76 ± 1.19	ISO 4587
60	11.68 ± 0.49	ISO 4587
80	11.77 ± 0.20	ISO 4587
100	10.98 ± 0.66	ISO 4587

Curing condition : One hour at 125°C

B. Weight absorption test

Test property	Result (%)
Water / 80°C 2000 hour	3.18
Methanol 100% / 20°C 2000 hour	1.01
Acetone 100% / 20°C 2000 hour	0.05
Xylene 100% / 20°C 2000 hour	0.1
Xylene 100% / 80°C 2000 hour	0

Notice :

- 1.The epoxy and hardener have to well mix by regular proportion for use.
- 2.Suggest curing at 125°C to obtain better performance.
- 3.After epoxy and hardener are mixed, it should be used in valid period, in case it gels and can't be use.
- 4.All implement for daubing and stowing should be cleansed right after used.

*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.*

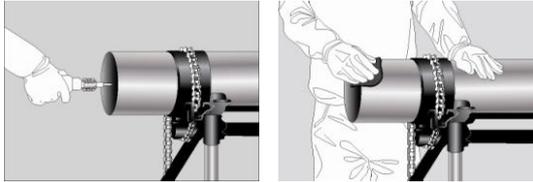
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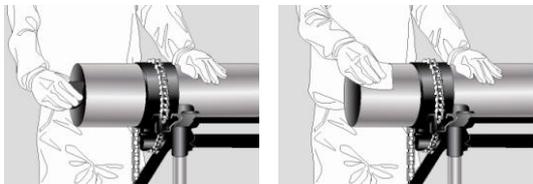


## PROCEDURE

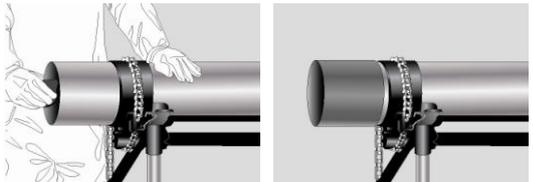
1. The removal of all traces of oil and grease from the surface is essential. Degrease by solvent such as acetone, MEK, Ethanol or iso-propanol solvent vapor in a vapor degreasing unit. Remove inner and outer surface deposits, e.g. tarnish, rust or mill scale, preferably by blasting with sharp grit.



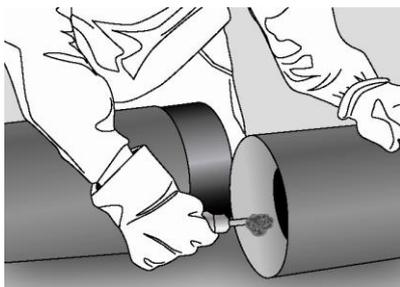
2. Clean the joint surfaces with a wire brush, or with abrasive cloth, or with waterproof abrasive paper. Dry, and remove all particles.



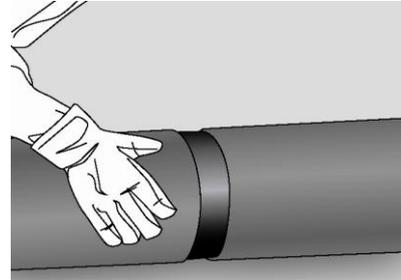
3. If bonding schedule has not taken place within one hour after pretreatment, preserve by priming the bond surfaces immediately or re-cleaning of all surface must be done.



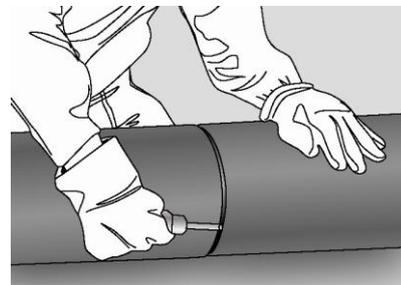
4. Mix SW2205-2A and SW2205-2B between 20°C to 35°C manually or robotically at least 3 minutes until the mixture becomes a uniform color. A thin, uniform layer of adhesive 0.02 to 0.03 in (0.5~0.8 mm) thick to inner surface and 0.03 to 0.04 in (0.8 to 1 mm) thick to outer surface will normally impart the greatest lap shear strength to the joint.



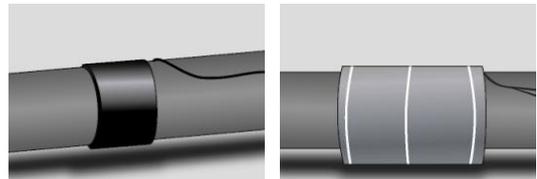
5. Insert the spigot into the socket end push it home, rotating the pipe slowly one quarter of a turn if possible. Be sure the spigot butts against the pipe stop and when necessary tap on a wooden block, placed over the pipe end. Never hit with a metal hammer directly on pipes and fitting.



6. Remove excess adhesive from the surface with the spatula (and from the inside of the joint if possible).  
\*Attention: Do not disturb the curing of the adhesive by moving or vibrating the joint.



7. Good properties are obtained after ambient temperature curing, but in order to achieve optimum performance properties, an elevated temperature cure or post-cure is recommended. Insulate the heating blanket and to close one of the pipe ends is a way to prevent draught. For maximum chemical resistance, the product should be cured at 125°C for 1 hour.



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## MATERIAL SAFETY AND HANDLING INFORMATION

### SKIN CONTACT:

Thoroughly wash exposed area with soap and water immediately. Remove contaminated clothing. Launder contaminated clothing before re-use.

### EYE CONTACT:

Flush with large amount of water immediately and continuously for 20 minutes, lifting upper and lower lids occasionally. Get medical attention.

### INGESTION:

Do not induce vomiting. Keep person warm, quiet and get medical attention. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

### INHALATION:

If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, quiet, and get medical attention.

### PERSONAL PROTECTION:

Do not breathe vapors. High concentration of vapor can be hazardous. Keep out of sewers. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. For large spills, warn public of downwind explosion hazard. Check area with explosion meter before re-entering area. Ground and bond all containers and handling equipment.

## 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.

These hardeners should retain their 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

1. **SWANCOR 2205-2A** is supplied in 167 g PP drum..
2. **SWANCOR 2205-2B** is supplied in 83 g PP drum..

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