



SWANCOR 907 EPOXY VINYL ESTER RESIN

Product Description

SWANCOR 907 is a Novolac type epoxy vinyl ester resin. It combines superior retention of mechanical properties at high temperature. such as tensile and flexural strength, and superior corrosion to chemical mixture, oxidizing chemicals and solvents etc. **SWANCOR 907** is designed to provide superior toughness with excellent fatigue resistance due to high heat distortion temperature.

Applications

- Chemical storage tanks, pipes, fume gas desulfurizing systems (FGD), scrubbers, ducts.
- Corrosion resistant flooring while incorporated with aggregates.
- Equipment specified to handle mixture of air, exhaust gases or potentially flammable liquids.

Fabrication Methods

- Can be easily applied by hand lay-up laminating, spray-up, pultrusion, resin transfer molding (RTM) and filament winding.
- Can be used in polymer concrete casting.
- can comply with US FDA regulation 21 CFR 177.2420 if the resin is properly formulated and cured.

Typical properties of liquid resin

Property* ¹	Value
Appearance	Clear amber liquid
Solid Content	61 +/- 1.5
Viscosity	430 +/- 150
Specific Gravity	1.06 +/- 0.02
Gel Time	15~25
Shelf Life (months)	6

*¹ Measurement were obtained under 25° C.

*² LVT-#3-60rpm@25° C.

*³ 6%cobalt: 0.4phr, 100% DMA: 0.05phr,55%MEKP: 1.2phr @250C.

Typical clear casting properties of cured resin

Property	Measurement	Test Method
Tensile Strength (psi)	11,000~13,000	ASTM D636
Tensile Modulus (X 10 ⁵ psi)	5.0~5.3	ASTM D636
Tensile Elongation (%)	2.5~4.0	ASTM D636
Flexural Strength (pai)	17,000~20,000	ASTM D636
Flexural Modulus (X 10 ⁵ psi)	5.2~5.6	ASTM D636
Volume Shrinkage (%)	8.5~9.5	ASTM D636
Heat Distortion	144~150	ASTM D636
Temperature (°C/°F)* ⁴	291~302	
Barcol Hardness	40~46	ASTM D636

*⁴ Cure condition for HDT: 24 hours at room temperature then 24 hours at 150° C

Typical gel time of SWANCOR 907

Temperature	Chemicals	10~20 min	20~40 min	40~60 min
Cured by MEKP/CoOct/DMA* ⁷				
18°C/64°F	MEKP	1.50%	1.20%	1.20%
	CoOct	0.5%	0.50%	0.40%
	DMA	0.12%	0.04%	0.03%
25°C/77°F	MEKP	1.50%	1.00%	1.00%
	CoOct	0.40%	0.40%	0.30%
	DMA	0.06%	0.03%	0.02%
30°C/86°F	MEKP	1.20%	1.00%	1.00%
	CoOct	0.30%	0.30%	0.20%
	DMA	0.06%	0.00%	0.00%
Cured by BPO/DMA* ⁸				
18°C/64°F	BPO	1.50%	1.00%	1.00%
	DMA	0.10%	0.08%	0.05%
25°C/77°F	BPO	1.00%	1.00%	1.00%
	DMA	0.08%	0.05%	0.03%
30°C/86°F	BPO	1.00%	1.00%	1.00%
	DMA	0.08%	0.03%	0.025%
Curedb CHP/CoOcUDMA* ⁸				
18°C/64°F	CHP	---	3.00%	2.00%
	CoOct	---	0.50%	0.50%
	DMA	---	0.40%	0.10%
25°C/77°F	CHP	2.00%	1.50%	1.20%
	CoOct	0.60%	0.40%	0.40%
	DMA	0.20%	0.05%	0.05%
30°C/86°F	CHP	1.50%	1.00%	1.00%
	CoOct	0.40%	0.20%	0.20%
	DMA	0.05%	0.04%	0.00%

*⁷ Concentration: MEKP 55%, CoOct:6%, DMA:100%

*⁸ Concentration: BPO: 98%, CHP: 80%. DMA: 100%



NOTICE IN USE

1. If **SWANCOR 907** is blended with cobalt-salt promoters, shelf life will be shortened. Promoted SWANCOR 907 must be used within two weeks.
2. The gel time of **SWANCOR 907** is affected primarily by catalyst concentration and temperature. The variations of cure characteristics may be caused by the variations of catalyst, humidity, pigment, fillers and other additives. It is recommended that the fabricators check the cure characteristics with a small quantity resin before proceeding for bulk production.
3. **SWANCOR 907** contains organic solvent (styrene). Keep away from heat, sparks and flames.
4. **SWANCOR 907** is a potentially reactive chemical. Please store it in dark and keep away from heat and direct sunshine.
5. Containers, not completely emptied must be closed immediately after use.

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 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

Keep away from ignition sources; flames, pilot lights, electrical sparks, and sparking tools. NO SMOKING. Do not store in direct sunlight. Store separate from oxidizing materials, peroxides, and metal salts. Keep container closed when not in use. To ensure maximum stability and maintain optimum resin properties, resins should be

stored in closed containers at temperatures below 25°C (77°F). Copper or copper containing alloys should be avoided as containers.

SPILLS

Eliminate all ignition sources (flares, flames, including pilot lights electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent or other absorbent material and shoveled into containers.

WASTE DISPOSAL

Destroy by liquid incineration in accordance with applicable regulation. Contaminated absorbent should be disposed in accordance to government regulations.

PACKAGE

Standard packing is 200 kg steel drum.