

SWANCOR RH511 is a tough, low viscosity, recyclable radical-cured resin with high performance. It is designed for closed mould applications, including vacuum infusion, RTM and pultrusion with suitable reinforcements. An advantage of using SWANCOR RH511 was that the same resin could be used throughout the construction, because of its non-formaldehyde release. High filling this resin with ATH achieves a very high level of flame(F), smoke(S) and toxic(T) performance (EN45545-2 R1 HL2). Composite material formed by SWANCOR RH511 could be degraded by CleaVER with suggested process in high efficiency.

### Typical properties of liquid resins

Appearance	Clear amber liquid
Solid content	40.0-44.0 %
Viscosity*1	15-30 cps
Specific Gravity	1.01-1.04
Gel time*2	12-22 min
Shelf Life (months)	6(25°C)

\*1 LVT#61-60rpm , 25°C

\*2 50%BPO : 1.0% , 100%DMA:0.5% , 25°C

### Typical clear casting properties of cured resin(3.2mm)\*3

Tensile Strength	72-90 MPa	ASTM D 638
Tensile Modulus	3.0-3.8 GPa	ASTM D 638
Tensile Elongation	5.0-8.0 %	ASTM D 638
Flexural Strength	130-160 MPa	ASTM D 790

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Flexural Modulus	3.1-3.8 GPa	ASTM D 790
Heat Distortion Temperature(°C)	98-105	ASTM D 648
Barcol Hardness	40-50	ASTM D 2583

<sup>\*3</sup> Cured condition: 24 hours at room temperature then 2 hours at 105°C; Typical values: Based on material tested in laboratories, but variable from sample to sample. Typical values should not be constructed as guaranteed analysis of any specific lot or as specification items.

### SWANCOR RH511/ATH for vacuum infusion<sup>\*4</sup>

Formulation	RH511(phr)	BYK-W 996(phr)	SG10 LSA(phr)	Viscosity <sup>*5</sup> (cps)
	100	2	130	140-170
Temperature	Materials/gel time	20-40min	40-60min	90-150min
15 °C	6%Co 50%DMPT <sup>*6</sup> KP-100	0.30% 0.40% 1.00%	0.30% 0.30% 1.00%	0.30% 0.10% 1.00%
25 °C	6%Co 50%DMPT KP-100	0.20% 0.30% 1.00%	0.20% 0.20% 1.00%	0.20% - 1.00%
25 °C	98%BPO DMA	0.50% 0.05%		
35 °C	6%Co 50%DMPT KP-100	0.10% 0.30% 1.00%	0.20% - 1.00%	
Temperature	Materials/SPI gel time		5-9min	
82 °C	98%BPO		1.00%	

<sup>\*4</sup> According to different ATH, the gel time should be some different.

<sup>\*5</sup> LVT#62-60rpm , 25°C.

<sup>\*6</sup> 50%DMPT: N, N-Dimethyl-p-toluidine was diluted in styrene.

### Notice in use

- The gel time of SWANCOR RH511 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

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for bulk production.

2. SWANCOR RH511 is a potentially reactive chemical. Please store in dark and keep away from heat and direct sunshine.
3. Containers, not completely emptied must be closed immediately after use.

### Resin Storage

Keep away from ignition source; flame, pilot light, electrical sparks, and sparking tools. Do not store in direct sunlight. 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 temperature below 25°C. Copper or copper containing alloys should be avoided as containers.

### Package

Standard packing is 200 Kg steel drum.

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