

Epoxy Infusion System

Infusion System for High Wet Tg

Key Properties

- Very good flow
- Gel time at 60°C is 130 minutes
- Temperature resistant up to 155°C
- Flame Retardant properties

Applications

- Resin Infusion for Water Tanks

Processing Properties

		EI-2511 Resin		EH-2990 Hardener	
Mix ratio		pbw	100		50
		pbv	100		64
Density	ASTM D-792	g/cm ³	ca. 1.2		ca. 0.94
Viscosity at 77°F (25°C)	ASTM D-2393	cP	1600-2000		200-250

			Resin / Hardener	
Mix viscosity at 104°F (40°C)	ASTM D-2393	cP	250-550	
Pot life at 140°F (60°C)	150 ml	min	110-150	
Demold time at 104°F (40°C)		hours	TBD by customer depending on shape	

Cured / Mechanical Properties

Cure: 40°C to 120°C hold 1 hour + 2 hours at 180°C			Resin / Hardener	
Aspect	visual		Cream	
Density	ASTM D-792	g/cm ³	ca. 1.2	
Shore hardness D	ASTM D-2240		85	
Glass Transition Temperature, Tg	DMA	°F (°C)	311(155)	
Tensile strength	ASTM D-638-14	psi (MPa)	TBD	
Elongation at Break	ASTM D-638-14	%	TBD	
Fracture Toughness	ASTM D-5045-14	MPa.m ^{1/2}	TBD	

Processing

The processing and material temperature should be approximately 104°F (40°C).

For best results, apply vacuum to the material prior to casting. Mix the two components thoroughly in the ratio indicated. The mechanical properties and temperature resistance are only obtained through the post cure according to the recommended cure schedule.

Recommended cure schedule

Cure at 30°C to 120°C by ramping the temperature by 1°C per minute; then hold for 1 hour depending on the size and thickness of the parts. Subsequently, post cure at 180 °C for 2 hours. Next cool down gradually by 2°C per minute. The curing time, heating, and cooling rate depend on the size and thickness of the parts.

Packaging

RAKU®-TOOL EI-2511 Resin	TBD
RAKU®-TOOL EH-2990 Hardener	TBD

Storage

Original containers should be kept tightly sealed and stored at ambient temperatures 59-86°F (15°C to 30°C). If properly stored the products have the shelf-life indicated on the product label. Partly used containers should always be sealed appropriately and used up as soon as possible.

Handling Precautions

Good workplace ventilation is to be ensured during processing. At the same time, the employer's liability insurance association's industrial hygiene safety regulations regarding the handling of reaction resins and their hardeners are to be observed. Please take heed of the appropriate safety data sheets.
