

TECHNICAL DATA SHEET



SHOWA DENKO K.K.

13-9, Shiba Daimon 1-chome
Minato-ku, TOKYO, 105-8518, Japan
TEL: +81-3-5403-5600
FAX: +81-3-5403-5720

Bisphenol A type Vinyl ester resin

Ripoxy™ R-804J

Characteristics

- Excellent Chemical Resistance, especially against Acids, Alkalis and solvents
- High mechanical strength for FRP
- Excellent fatigue strength and excellent toughness

Advantages

- Lower viscosity : can use smoothly
- Quick curing
- Longer shelf life
- Less Bubble
- Possible BPO/DMA curing

Applications

- Chemical tanks, pipes, scrubbers, ducts
- Floor lining, Waterproof lining,
- Waste treatment systems lining
- Marine (yachts and boats)
- High strength FRP

1. Properties of liquid resin

Property	Unit	Value
Appearance	-	Clear yellow
Viscosity	dPa·s/25°C	2.0 - 3.5
Gel time	Min	16.0 - 25.0
Shelf life	Months/25°C	12

*Gel time: 25 °C 55%MEKPO 1.5phr Co-Oct(8%) 0.5phr

2. Properties of cured resin

Property	Unit	Cast	Laminate	Test method
Flexural strength	MPa	144	184	ASTM D790
Flexural modulus	GPa	3.6	7.6	ASTM D790
Tensile strength	MPa	82	111	ASTM D638
Tensile elongation	%	5.4	2.0	ASTM D638
Heat distortion temperature	°C	107	-	ASTM D648
Barcol Hardness	-	41	50	ASTM D2583
Curing shrinkage	%	7.6	-	ASTM D2566

*Laminated constitution: 3mats (450g/m²), glass contents 30%

3. Curing properties (Gel time)

(1) MEKPO/Co

Temperature (°C)	Materials	15-25min	25-35min	35-60min
20	MEKPO (%)		1.5	1.2
	Co-Oct8% (%)		0.25	0.25
	DMA (%)		0.06	0.06
25	MEKPO (%)	2.0	1.7	1.5
	Co-Oct8% (%)	0.5	0.3	0.3
30	MEKPO (%)	1.7	1.5	1.2
	Co-Oct8% (%)	0.3	0.3	0.3
35	MEKPO (%)	1.5	1.3	1.1
	Co-Oct8% (%)	0.3	0.3	0.3

*MEKPO:55% Methyl ethyl ketone peroxide *DMA : Dimethylaniline

(2) BPO/DMA

Temperature (°C)	Materials	15-25min	25-35min
20	BPO (%)	2.0	2.0
	DMA (%)	0.5	0.3
25	BPO (%)	2.0	1.7
	DMA (%)	0.3	0.3
30	BPO (%)	2.0	1.7
	DMA (%)	0.2	0.3
35	BPO (%)	2.0	1.5
	DMA (%)	0.2	0.2

*BPO: 50% Benzoyl peroxide *DMA : Dimethylaniline

Precautions for Handling

1. Industrial safety and health precautions

- Styrene contained , if inhaled , it could cause organic solvent poisoning and other health damages.
- When using Ripoxy , secure proper mechanical ventilation and wear anti-organic gas mask or air-supplied respirator and proper protective clothes to prevent any contact with the body.

2. Storage and handling precautions

- Ripoxy is a flammable liquid in Class 3 under the United Nation Law
- Handling should be made away from heat or fire , and storage must conform

3. Precautions in use

- When using Curing agent and Promoter , stir the Promoter well first and then add the Curing agent (Simultaneous addition must be made because it would cause explosive decomposition)

4. First aid

- When Ripoxy gets into the eyes , wash away with abundant water for at least 15 minutes , and see the doctor if there is pain or change in appearance.

5. Disposal precautions

- Dispose after the content is completely used up.
- Any surplus resin containing curing agent and/or promoter must be cured in a water bath. (If disposed before curing, the curing exothermicity could trigger spontaneous combustion.)

6. Other precautions

- For detailed information on the safe handling of Ripoxy , please make sure to read before using the separately prepared 'Safety Data Sheet'.

The information presented herein, while not guaranteed, is true and accurate to the best of our knowledge.

However, no warranty or guarantee is made regarding the performance or stability of any product since the manner of use and condition of storage and handling are beyond our control.