TECHNICAL DATA SHEET

SHOWA DENKO K.K.
13-9,Shiba Daimon 1-chome
Minato-ku,TOKYO,105-8518,Japan
TEL:03-5403-5600
FAX:03-5403-5720

Vinyl ester Flake Compound

Ripoxy™FC-83 NS WHITE EX (Intermediate coat)
Ripoxy™FC-83 S GREY EX (Top coat)

1. Ripoxy Flake Lining

Normally resin lining refer to FRP lining whereby resin are added onto the fiber glass. It is applied onto substrate to form thickness of 1-3mm. However in this case for this introduction of flake lining, flake glass is added into liquid resin. The later is mixed into paste mixture (Ripoxy FC). This material can be applied onto substrate using a brush or a roller to a thickness of 400-700 μm.

Flake glass is mixed together with Ripoxy (vinyl ester resin). It is Ripoxy FC. Catalyst is added into Ripoxy FC and applied onto substrate using a brush or a roller. Application thickness is 1mm thickness to 100 layer of flake glass lining. Penetration rate of chemicals and gas reduces considerably. Heat resistance increases as curing shrinkage, locked-in stress and thermal coefficient of linear expansion reduces. The working is speedy and construction period shortens because flake lining consists of 3 plies only of Ripoxy flake compound.

2. Characteristic

（1）Thin layer of lining is able to resist strong chemical penetration because of low penetration rate for chemicals, gas and water vapor.

（2）As a result of reduction of curing shrinkage, locked-in stress is reduces. Thermal coef ficient of linear expansion is small. There is increase in adhesion to substrate, heat r esistance and thermal cycle resistance.

（3）It can resist mechanical damages such abrasion and scratching. Even if there is a str ong impact on the lining, only a small portion of the point of impact is affected.

（4）Insulation resistance is high.

（5）Construction period shorten and can be repaired easy.

3． Properties of Liquid & cured resin

Item	Unit	Ripoxy FC-83 series	Notes
Specific gravity	—	1.3	
Color	—	Intermediate coat : White Top coat : Grey	
Viscosity	dPa・s / 25℃	10.0 ～ 20.0	
Tensile strength	MPa	60 ～ 70	
Flexural strength	MPa	100 ～ 120	
Tenlile Elongation	%	1.5	
coefficient of linear expansion	1/℃	2.5×10^{-5}	
Shear adhesion strength	MPa	≧10	
Abrasion loss	Mg	100 ～ 110	Tabor abrasion test(CS-17, 1kg, 1000cycle times)
Water-vapor permeability	g/hr ^c ㎡	5 ～ 6×10^{-6}	JIS Z 0208
Operating temperature	℃	≦50	

4． Curing Properties

Temperature (℃)	MEKPO (phr)	Pot gel (min)
25	3.0	20～30
30	2.0	60～70
	2.5	50～60
35	2.0	50～60

*MEKPO：Methyl ethyl ketone peroxide 55%

5． Precautions for handling

In handling Ripoxy, please observe the following notes and carry out your work properly.

① Industrial safety and health precautions

・Styrene contained in styrene type of Ripoxy, if inhaled, it could cause organic solvent poisoning and other health damages.

・When using Ripoxy, secure proper ventilation and wear anti-organic gas mask or air-supplied respirator and proper protective clothes to prevent contact with the body.

②Storage 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 to the provisions of own country Law.

・Ripoxy, curing agents and promoters must not be exposed to direct sunlight and store in a cool, dark place.

③Precaution in use

・The pot life and curing time differ from one resin grade to another. Grasp the properties of the resin before use.

・When using curing agent and promoter, first stir the promoter well and then add the curing agent. (Simultaneous addition must never be made because it would cause explosive decomposition.)

④First aid

・When Ripoxy gets into the eye, wash away with abundant water for at least 15 minutes, and see the doctor promptly.

・When inhaling vapor and feeling uncomfortable, rest in a place of fresh air, and if necessary see the doctor.

・When Ripoxy gets into contact with skin, wash away with soap and water immediately, and see the doctor if there is pain or change in appearance.

・If Ripoxy catches fire, use CO_2, foam or powder fire extinguisher.

⑤Disposal 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.)

⑥Other precautions

・For detailed information on the safe handling of Ripoxy, please make sure to read before use the separately prepared "Material Safety Data Sheet".