

DIAMOND (DF-R102/DF-H202)

DF-R102 is a modified bisphenol-A based epoxy adhesive resin to be used in conjunction with Hardener DF-H202. Joints made with this adhesive system is able provide high adhesion strength and are resistant to moisture and mild chemicals. The appropriately prepared joints perform well even at temperature as high as 120°C.

It is suitable for bonding a wide variety of metals, ceramics, glass, rubbers, rigid plastics and other materials, and is widely used in many industrial applications where resistance to aggressive or warm environments are required. The low out gassing makes this product suitable for specialist electronic telecommunication and aerospace applications.

TYPICAL USE

- Submersible pump
- Repair and Maintenance
- Break Liner
- Bearing
- Marble Joints
- Underwater Jointing

Note: Room temperature curing adhesive suitable for similar and dissimilar substrates including metals and FRP

ADVANTAGES

- Thixotropic, gap-filling
- Good chemical resistance
- Temperature resistant to 120°C
- Ambient curing
- High electrical insulation properties
- Could be use underwater under special conditions

MATERIAL PROPERTIES

DIAMOND DF-R 102

Properties	Unit	Typical Values
Appearance	---	Beige Paste
Density @ 25°C	g/cm ³	1.64 – 1.79
Viscosity @ 25°C	mPas	30000 – 60000

Flash Point	°C	110
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DIAMOND DF-H 202

Properties	Unit	Typical Values
Appearance	---	Grey Paste
Density @ 25°C	g/cm ³	1.65 – 1.75
Viscosity @ 25°C	mPas	48000 - 100000
Flash Point	°C	> 105

PROCESSING PROPERTIES

Property	Mix Ratio R:H	Initial mix Viscosity	Pot life of Mix (100gms)	Curing Schedule
Condition		@ 25°C	@ 25°C	
Unit	W/W	cPs	Minutes	Hours
Value	100:50	60000-100000	25-30	24-29h@ RT

TYPICAL PROPERTIES OF CURED SYSTEM TESTED AT 23°C

(Cured 16 hours at 40°C, substrate used is aluminium)

Properties	Unit	Test Values
Roller Peel	N/mm	1.6
Hardness Shore-D	-	>80
Tensile Strength	MPa	42 -44
Tensile Modulus	MPa	4700

PROCESSING

STEP 1: SURFACE PREPARATION

The adherents must be thoroughly degreased with a good degreasing solvent (e.g. toluene, acetone trichloroethylene) and abraded with coarse emery paper or chemically etched. Inadequately pre-treated substrates may not bond satisfactorily.

STEP 2: APPLICATION

The mixed mass is applied by brush or spatula on the surface to be adhered. The mix must be used within its pot-life.

For best results: Roughen, dry and degrease surfaces to be bonded.

STEP 3: CURING

Curing normally takes place at room temperature within about 24 hours depending on the ambient temperature but may be accelerated by the application of heat.

SAFETY FEATURES

- Store the container with the lid tightly closed in an upright position, in a cool, dry place
- Keep out of reach of children and away from eatables
- May be harmful if swallowed. In case of ingestion seek immediate medical attention
- Wear eye protection during application. In case of contact with eyes, rinse immediately with plenty of water and if required seek medical advice

STORAGE AND HANDLING

The resin and hardener, when stored in their original containers and not exposed to undue heat or humidity as in outdoor open shades, will have a minimum shelf life of 2 years. As far as possible, direct contact of resin and hardener with the skin should be avoided as they might cause irritant on sensitive skins. It is advisable to wash off immediately in case of skin contact. Special barrier creams and cleansing creams are available commercially as additional safe guards. Please refer MSDS for detail safety instructions.

Note

All recommendations for use of our products, whether given by us in writing, verbally are to be implied, from the results of tests carried out by us, based on the current state of our knowledge. Although the information contained in this sheet is accurate to the best of our knowledge, no liability can be accepted in respect of such information and no warranty or conditions are intended in respect of the products described, as the conditions of application are beyond our control.
