



Technical Data Sheet

Resin

DOLPHON® CR-1035

- **Two-Part, Red Epoxy Casting Resin Kit**
- **Cures quickly at Room Temperature**
- **Excellent Electrical and Physical Properties**
- **Good Thermal Conductivity**
- **Low Viscosity for Good Penetration**
- **Good Machinability of Cured Resin**

Description

DOLPHON® CR-1035 is a semi-rigid, two-part, room temperature curing epoxy resin specifically formulated for encapsulation. It is supplied in kit form for easy measuring of the resin and reactor.

Application

DOLPHON® CR-1035 can be used in for the encapsulation of electric motors, stators, control coils, solenoid coils and other electrical and electronic parts.

Processing Guidelines

Mixing the components - Mix 100 parts of resin (part A) to 7 parts of reactor (part B) by weight. Kits come with premeasured amounts resin and reactor for ease of use. Mix slowly to avoid stirring excessive air into the mixture. To assure thorough blending, scrape the side of the container during mixing. Mix 32 grams of reactor to 1 pound of resin.

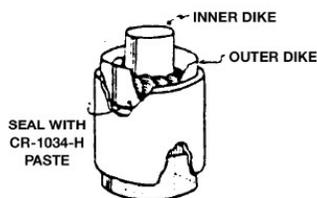
The pot life of the mixed compound will be approximately 1 ½ hours at 70°F, depending on quantity of material being mixed. Ingredients should be kept covered to prevent contamination or absorption of moisture during storage.

Preparation of Unit - Varnish impregnation is not required with this method. However, the laminations should be dipped and baked in DOLPHON® epoxy varnish or a Hi-Therm varnish prior to winding. This step prevents resin from leaking through the laminations. Construct molds of materials that will release easily from epoxy casting. (See Step 2 below) Preheat unit to 220-250°F (104.4-121.1°C) and cool to 110-130°F (43.3-54.4°C) before pouring compound.

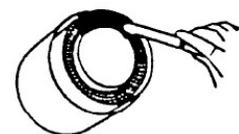
Application and Cure - Seal bottom end of dike by applying DOLPHON® CR-1034-H epoxy resin paste. Paste will gel in 2-3 hours. Then tilt unit and slowly pour the mixed low viscosity DOLPHON® CR-1035 resin into mold in one spot only. This will avoid entrapment of air. (See step 4 below) The material will gel at room temperature in 1 to 2 hours and cures overnight. To accelerate cure, bake for 3 hours at 150°F (65.5°C).



1. Prepare stator for encapsulation, providing adequate stress relief.



2. Build dikes and seal with DOLPHON CR-1034-H paste.



3. Seal bottom of dikes by applying DOLPHON CR-1034-H paste over a layer of glass cloth placed over the coil ends.



4. Invert and pour low viscosity liquid into mold, pouring slowly from one spot.



5. Allow resin to cure at room temperature.



6. Remove dikes, smooth edges and clean resin from laminations.

Physical Properties, Mixed	Test norm	Unit	Value
Mix Ratio, resin: hardener	by weight		100:5
Color / appearance			Red
Viscosity Brookfield, 77°F (25°C)	ASTM D2196	cps	Paste
Pot Life, 77°F (25°C)		hours	1.0 – 1.5
Cure Time, 77°F (25°C)	initial cure (full)	hours	3-4 (24)
Technical Properties	Test norm	Unit	Value
Hardness, Shore D, 25°C (77°F)	ASTM D2240		75
Tensile Strength, 25°C (77°F)	ASTM D638	psi	8,500
Water Absorption, 24 hours	ASTM D570	%	0.3
Thermal Conductivity		W/m·K	0.25
Chemical Resistance	Most solvents, acids, bases		Excellent
Electrical Properties	Test norm	Unit	Value
Dielectric Strength, 1/8" specimen	ASTM D149	volts/mil	410
Surface Resistivity	ASTM D257	ohms	5.0 x 10 ¹²
Volume Resistivity	ASTM D257	ohm-cm	6.0 x 10 ¹³



Packaging - CR-1035 is conveniently packaged in 1 pound, 2 pound, 8 pound and 50 pound kits.

Storage and Shelf Life

The shelf life of DOLPHON® CR-1035 is 12 months from date of shipment from our plant when stored in the original closed containers at 77°F/25°C or below. Store in a cool, dry place that is protected from direct sunlight and other sources of heat. Product must be kept covered to prevent contamination or moisture absorption during storage.

Health and safety

May cause skin irritation or eye injury. Wash exposed area with soap immediately after contact. Use in well-ventilated area. Safety Data Sheets defining the known hazards and describing safety precautions appropriate for this product are available upon request from Von Roll USA, Inc., Schenectady, NY, (518) 344-7100 and/or www.vonroll.com. Similar information for solvents and other chemicals to be used with this product may be obtained from the appropriate supplier and used accordingly. We recommend following all hygiene and safety standards while processing material.

Liability

The information on this data sheet and the chart above is to be understood as a guideline and has general information. It is not binding for Von Roll and it justifies in no case any liability. Von Roll reserves the right to change the information at any time. The product properties set forth in this data sheet are based on the results of testing of typical material produced by the affiliated companies of Von Roll Holding Ltd. (underneath referred as Von Roll). Some variation in product properties is typical. Comments or suggestions relating to any subject other than product properties are offered only to call the end-user's or other person's attention to considerations which may be relevant in the independent determination of the use and/or manner of use of product. Von Roll does not claim or warrant that the use of its product will have the results described in this data sheet or that the information provided is complete, accurate or useful. The user should test the product to determine its properties and its suitability for the intended use. Von Roll expressly disclaims any liability for any damage, harm, injury, cost or expense to any person resulting directly or indirectly from that person's reliance on any information contained in this data sheet. Nothing contained in this data sheet constitutes representation or warranty as to any matter whatsoever. Von Roll makes no warranties whatsoever in this data sheet, expressed or implied, including any implied warranty or fitness for a particular use or purpose. Von Roll shall in no event be liable for incidental, exemplary, punitive, or consequential damages.

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