



Product Data Sheet

Ray-bond™ R84048

Liquid Adhesive

PRODUCT DESCRIPTION

Ray-bond™ R84048 liquid adhesive is a thermosetting adhesive (phenolic resin base) designed to enhance the bonding friction material to metal, to other friction material and to insulating material. Ray-bond™ R84048 liquid adhesive has excellent heat stability and good bonding qualities making it suitable for high or low temperature applications. It provides a firm strong bond that is resistant to most types of chemical attack. Other grades are available where special conditions may be met, such as shock, vibration, flexing, etc.

Intimate contact between mating surfaces is essential for best results. The maximum gap allowable between two surfaces is about 0.0015" (0.038 mm)

METHOD OF APPLICATION

Brush or roll coating - other grades available for other application methods.

TYPICAL PROPERTIES

Solids (1 hour @ 135°C, 275°F)	52% to 55%
Wt/Gal	8.4 lbs. approximately
Viscosity (25°C), (Bkfld. #2 spindle @ 20 RPM)	3 8 0 0 - 4 8 0 0 c p s
Solvent for dilution	Denatured Alcohol
Chemical resistance	Resistant to oils, solvents, water
Disc shear strength	(Procedure SAE J840)
73°F (23°C)	2000 psi minimum (12.8 mPa)
400°F (204°C) (1 hour)	600 psi minimum (10.3 mPa)
Flash point (closed cup)	71°F (21.7°C)
Storage life, 40°F - 60°F (4 - 16°C)	90 days maximum
Storage life, 60°F - 80°F (16 - 27°C)	30 days maximum
Coverage, 0.005" (0.127 mm) dry film	Approx. 45,000 in ² /gal (7.669 m ² /l)



CURE

Complete cures will be obtained with any of the following bond line temperatures and time:

350°F for 5 minutes; 300°F for 10 minutes

177°C for 5 minutes; 149°C for 10 minutes

The above temperatures and times are for hot press or batch oven cures. Shorter cures are possible at higher temperatures. Setting the cure, however, requires considerable experience and should be arranged under the guidance of the factory representative. Constant pressure *is* mandatory throughout the cure cycle. The pressure should be sufficient to bring the surfaces into intimate contact. The normal working range is 50 -250 psi (0.34 – 1.7 mPa).

INSTRUCTIONS

1. Surfaces to be bonded must be free of rust, dirt, grease, previous plating's or any foreign matter. For metallic members, this may be accomplished by roughening to develop "tooth" by shot blasting or chemical etching. Non-metallic surfaces may be wiped with a clean rag saturated with an oil-free solvent such as acetone.
2. Apply the adhesive to both surfaces to be bonded. A sufficient amount should be applied to completely fill all voids and leave a 0.0015" (0.0381 mm) coating when dry, over the entire area of each bonding surface.
3. Allow to dry at room temperature until tack-free.
4. Assemble the parts using suitable fixture; maintain contact to prevent movement of parts during cure.
5. Cure (see above).

STORAGE

If stored at normal room temperature (77°F, 25°C). R84048 will have usable life range of 30 days. Refrigeration between 40 - 60°F (4°C - 16°C) will extend the life to 90 days. Parts, once coated may be stored for one (1) year at normal room temperature, before bonding.

FREIGHT CLASSIFICATION

Adhesive, Red Label, UN1133



Ray-bond™ R84048 Liquid Adhesive (cont.)

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