

50-3141FR FAST CURING FLAME RETARDANT THERMALLY CONDUCTIVE EPOXY ADHESIVE

DESCRIPTION:

50-3141FR is a toughened, two-component, fast curing thermally conductive epoxy adhesive that meets UL94 V-0 flame retardant requirements. This product was specifically formulated for use in the convenient TriggerBond® dual barrel cartridge system.

50-3141FR has a 2:1 mix ratio and develops a 2,000 psi Lap Shear strength (aluminum to aluminum) in four hours at room temperature.

50-3141FR provides a unique combination of high lap shear strength, high peel resistance and impact endurance. Once fully cured, the epoxy adhesive is also resistant to a wide range of chemicals and solvents. The adhesive also offers higher heat performance than most fast setting epoxies.

50-3141FR offers fast heat dissipation for a wide range of electronic applications. The black resin and off-white hardener provide an excellent visual indication of a complete mix.

FEATURES:

- Fast room temperature cure
- Low Odor
- Thermally conductive
- Flame retardant
- Available in the TriggerBond® system
- Forms strong bonds to a variety of substrates
- Electrically insulating
- Vibration and impact resistant

TYPICAL PROPERTIES:

Viscosity, cps, 25 °C

50-3141RFRBK Resin	250,000
50-3141CFRWH Catalyst	150,000
Mixed	Paste

Color

50-3141RFRBK Resin	Black
50-3141CFRWH Catalyst	Off-White
Mixed	Black

Gel Time, Minutes, 5 grams, 25 °C 15-18

Hardness, Shore D

25 °C	80
70 °C	60

Operating Temperature, °C	-50 to +135
Specific Gravity, 25 °C	
50-3141RFRBK Resin	1.55
50-3141CFRWH Catalyst	1.50
Lapshear Strength (Al to Al), psi	
After 24 hours	2,300
Dielectric Strength, V/mil	440
Dielectric Constant, 25°C, 100 Hz	4.9
Volume Resistivity, ohm-cm, 25 °C	3.1 x 10 ¹³
Thermal Conductivity, W/m·K	1.1

Use as an adhesive only. Curing masses greater than 25 grams is not recommended due to the possibility of an exothermic reaction.

INSTRUCTIONS FOR USE:

1. By volume mix 2 parts 50-3141RFRBK to 1 part 50-3141CFRWH. If using TriggerBond® cartridges follow dispensing guidelines.
2. Apply product to substrate to be bonded and join within 3-5 minutes.
3. Cure according to one of the following schedules. Tack free time at 25 °C is 45 minutes.

a) 25 °C	2-4 hours
b) 65 °C	< 10 minutes

PREPARATION OF SURFACES:

Surfaces must be clean and grease free. Use an oil free solvent such as acetone to wipe surfaces. Adhesion can be substantially increased by abrading the surfaces to be bonded with emery cloth, sandpaper, carbide grinding tools, and sand blasting. A roughened, porous surface will produce the best results. Any oxidized metal films should be removed just prior to application of the epoxy adhesive mixture.

STORAGE, HANDLING, & SAFETY:

Expected shelf life is 12 months at room temperature. Store in a cool, dry place in original containers. Please read and understand Safety Data Sheet (SDS) before using this product.

AVAILABILITY:

50-3141FR is available in the convenient TriggerBond® dual barrel cartridges in 50 mL, 200 mL, and 400 mL.

IMPORTANT:

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10/2024