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14251



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5-MINUTE EPOXY

PRODUCT DATA SHEET

A rapid-curing, general purpose adhesive / encapsulant. It forms a hard, rigid bond or coating in minutes.

FEATURES

- 7 Minute fixture time
- 100% reactive, no solvents
- Good dielectric strength
- Good solvent resistance
- Bonds metals, fabrics, ceramics, glass, wood and concrete (in combinations)

RECOMMENDED APPLICATIONS:

- Cures fast for quick metal-to-metal bonding and repairs
- Pots and encapsulates electronic components and assemblies
- Seals against dust, dirt and contamination
- Fast-curing, thin set, bonding above 4°C

PRODUCT DATA

Physical Properties - (uncured)

| | |
|---------------------------------------------------|------------------------|
| Colour..... | Clear |
| Mix Ratio by volume..... | 1:1 |
| Mixed Viscosity..... | 8,000 - 10,000 cps |
| Working time 28 Grams 24°C..... | 4 minutes |
| Functional cure @ 25°C..... | 45 minutes |
| Coverage(cm ² @0.005mm thickness)..... | 33.50 |
| Specific Volume..... | 833cm ³ /kg |
| % Solids by volume..... | 100.00 |

Performance Characteristics - (7 days cured @ 24°C)

| | |
|------------------------------------------------|------------------------|
| Adhesive tensile shear ASTM D1002..... | 9.7N/mm ² |
| Operating temperature, dry..... | -40°C - 93°C |
| Cured density ASTM D792..... | 1.10gm/cm ³ |
| Cured hardness ASTM D2240..... | 85D |
| Dielectric strength ASTM D149 (Volts mil)..... | 490 volts/mil |

Chemical Resistance 7 days room temperature cure (30 days immersion @ 24°C)

| | | | |
|---------------------|-----------|----------------------|-----------|
| Kerosene | Very Good | Methanol | Fair |
| Hydrochloric Acid | Very Good | Toluene | Very Good |
| Chlorinated solvent | Fair | Ammonia | Very Good |
| 10% Sulphuric Acid | Very Good | 10% Sodium Hydroxide | Very Good |

PLEASE CONSULT FACTORY FOR OTHER CHEMICALS

Epoxies are very good in water, saturated salt solution, leaded gasoline, mineral spirits, ASTM#3 oil and propylene glycol. Epoxies are generally not recommended for long-term exposure to concentrated acids and organic solvents.



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APPLICATION INFORMATION**Surface preparation:**

5-Minute Epoxy works best on clean surfaces. Surfaces should be solvent-wiped, free of heavy deposits of grease, oil, dirt or other contaminants, or cleaned with industrial cleaning equipment such as vapour phase degreasers or hot aqueous baths. Abrading or roughing the surfaces of metals will increase the microscopic bond area significantly and optimise the bond strength.

MIXING:

Proper homogenous mixing of the two epoxy components of resin and hardener are essential for the curing and development of stated strengths. Always mix the two components with clean tools, preferably of a disposable design.

For small amounts, use Devcon's 28g Dev Tube™ package or the 50ml Dev-Pak with Mark 5 Applicator. If used with a static mix nozzle, the epoxy can be dispensed, metered, mixed and directly applied to the surface to be bonded.

APPLICATION:

Apply mixed epoxy directly to one surface in an even film or as a bead. Assemble with the mating part within the recommended working time. Obtain firm contact between the parts to minimise any gap and ensure good contact of the epoxy with the mating part. A small amount of epoxy should flow out the edges to show there is adequate gap filling. For very large gaps, apply epoxy to both surfaces and spread to cover the entire area, or make a bead pattern which will allow flow throughout the joint.

Let bonded assemblies stand for the recommended functional cure time before handling. They are capable of withstanding processing forces at this point, but should not be dropped, shock loaded or heavily loaded.

CURE:

Cure time for 5-minute epoxy is ½ - 1 hour for a functional cure. Full bond strength is reached in 16 hours.

STORAGE AND SHELF LIFE:

Devcon Epoxy Adhesives should be stored in a cool, dry place when not used for a long period of time. A shelf life of 2 years from date of manufacture can be expected when stored at room temperature 22°C in their original containers.

PRECAUTION:

For complete safety and handling information please refer to the appropriate materials Safety Data Sheets prior to using this product.

For technical assistance please call 01933 675299

ORDERING INFORMATION

| <u>Stock No</u> | <u>Unit size</u> | <u>Stock No</u> | <u>Unit size</u> |
|-----------------|-------------------------|-----------------|----------------------------|
| 14251 | 28g Dev Tube | 14280 | Mark 5 applicator gun |
| 14210 | 70g (2 tubes) | 14285 | Mark 5 mix nozzle |
| 14201 | 500g | 20020 | 400ml manual applicator |
| 14270 | (50ml) Mark 5 (Dev Pak) | 20010 | 400ml pneumatic applicator |
| 14291 | 6.4 mm dia mix nozzle | 29991 | 50ml mix nozzle |
| 14271 | 200ml cartridge | 14282 | 200ml manual applicator |
| 14272 | 400ml cartridge | 14281 | 200ml pneumatic applicator |
| 29999 | 400ml mixer nozzle | 20019 | 200ml mixer nozzle |

Warranty: Devcon will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained
Disclaimer: All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Devcon makes no representations or warranties of any kind concerning this data