

Part No. K45-S14

TECH Sheet: Rapid set epoxy gel

FOR CHEMICAL EMERGENCIES PLEASE CONTACT: 1-800-535-5053

A fast-curing, thixotropic/non-migrating adhesive, designed for filling gaps.

FEATURES

- Non-sagging adhesive
- Gap-filling to .250 inches
- Rapid 7 minute fixture
- Good solvent resistance
- 100% reactive, no solvents
- Good environmental resistance

RECOMMENDED APPLICATIONS

- Bonds rough and irregular surfaces quickly
- Ideal for vertical and overhead applications
Such as signs and plaques
- Effectively bonds concrete, wood, fabrics, steel, aluminum, ceramics, ferrites, and copper alloys

PRODUCT DATA

Physical Properties-(uncured)

| | |
|----------------------------------|---------------------------|
| Color..... | Amber |
| Mix Ratio Volume..... | 1:1 |
| Mixed Viscosity..... | Gel |
| Working Time 28 gram @75° F..... | 5 minutes |
| Functional Cure @75° F..... | 45 minutes |
| Coverage (Based on 25 ml)..... | 152 sq. in. @ .010" |
| Specific Volume..... | 23.7 in ³ /lb. |
| % Solids by Volume..... | 100 |

Performance Characteristics – (7 days cured @ 75°F)

| | |
|--|-------------------------|
| Adhesive tensile shear, ASTM D1002* | 2,500psi |
| Operating temperature, dry..... | -40°F to +200°F |
| Cured density, ASTM D792..... | 1.17 gm/cm ³ |
| Cured hardness, ASTM D2240..... | 80D |
| Dielectric strength, ASTM D149(volts/mil)..... | 440 |
| Compression Strength (ASTM D695)..... | 11,000psi |

*Overlap shear run @ 0.005" bond line thickness.

Chemical Resistance: 7 days room temperature cure (30 days immersion @ 75°F)

| | | | |
|----------------------|----|----------------------|----|
| Kerosene | VG | Methanol | U |
| 3% Hydrochloric Acid | VG | Toluene | VG |
| Chlorinated Solvent | U | Ammonia | VG |
| 10% Sulfuric Acid | VG | 10% Sodium Hydroxide | VG |

Key: VG = Very Good F = Fair U = Unsatisfactory

PLEASE CONSULT FACTORY FOR OTHER CHEMICALS.

Epoxies are very good in 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.

APPLICATION INFORMATION**Surface Preparation:**

Rapid Set Gel 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 vapor phase degreasers or hot aqueous baths. Abrading or roughing the surfaces of metals will increase the microscopic bond area significantly and optimize the bond strength.

MIXING:

Proper homogeneous 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.

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 minimize any gap and ensure good contact of the epoxy with the mating part. A small fillet 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 Rapid Set Gel is $\frac{3}{4}$ to 1 hour for a functional cure. Full bond strength is reached in 16 hours.

STORAGE AND SHELF LIFE:

Chemical Concepts Epoxy adhesives should be stored in a cool, dry place when not used for a long period of time. A shelf life of 1 year from date of manufacture can be expected when stored at room temperature 70°F (22°C) in their original containers.

PRECAUTION:

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

For technical Assistance, please call 1-800-220-1966

* Consult Customer Service for special packaging at 1-800-220-1966

Warranty: Chemical Concepts 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. Chemical Concepts makes no representations or warranties of any kind concerning this data.

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