3M™ Scotch-Weld™ Epoxy Adhesive DP-460 EG

Product Description

3M™ Scotch-Weld™ Epoxy Adhesive DP-460 EG is designed to have lower outgassing and lower ionics than 3M™ Scotch-Weld™ Epoxy Adhesive DP-460. Laboratory testing has shown that 3M™ Scotch-Weld™ Epoxy Adhesive DP-460 EG's curing and adhesive performance to be comparable to 3M™ Scotch-Weld™ Epoxy Adhesive DP-460.

Application Ideas

- Hard Disk Drive Assembly
- Spindle Motor Assembly
- Magnet Bonding
- E-Block Assembly
- Bearing Cartridge Assembly
- Potting
- Rigidizing

Key Features

- Curing and bonding performance comparable to 3M™ Scotch-Weld™ Epoxy Adhesive DP-460.
- Total outgassing < 1000 μg/g (via GC/MS, 85°C for 3 hours).
- Siloxane outgassing ≤ 5 μg/g (via GC/MS, 85°C for 3 hours).
- Lower chloride ion content than standard epoxies.

Typical Physical Properties

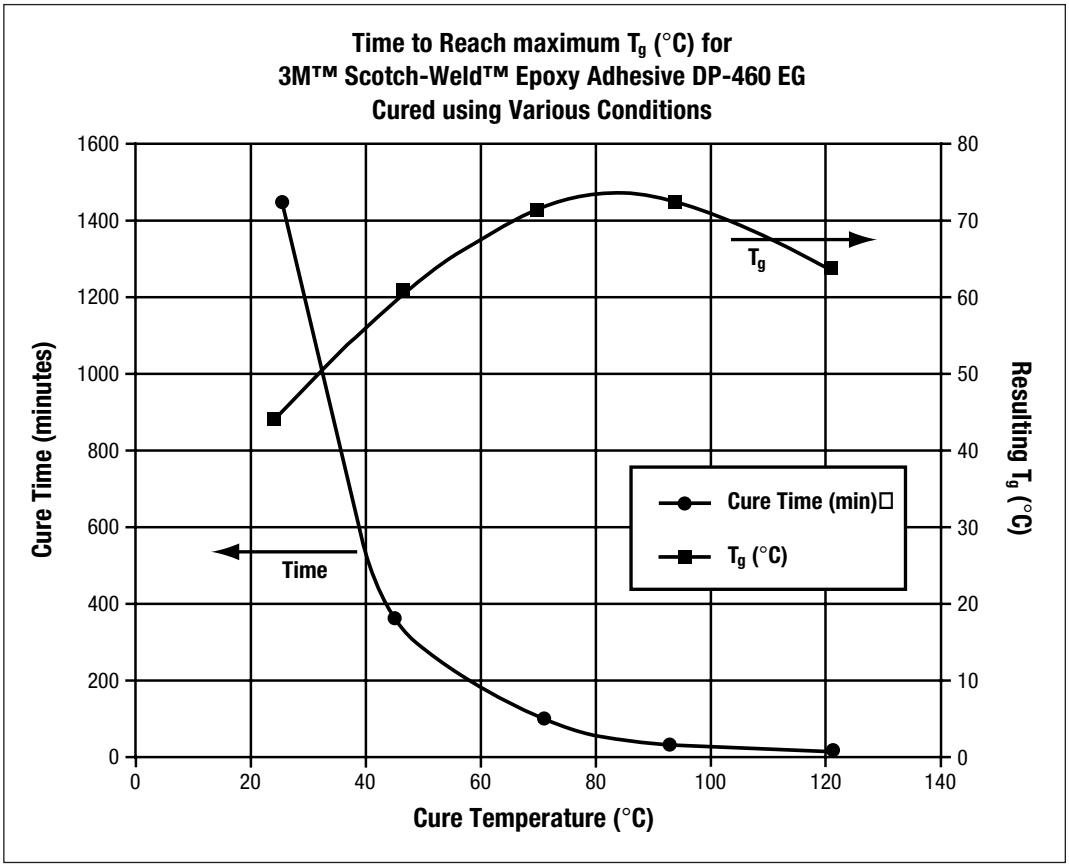
Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Product		3M™ Scotch-Weld™ Epoxy Adhesive DP-460 EG
Viscosity (at 72°F [23°C])	**Base** **Accelerator** **Mixed**	25,000 - 45,000 cps 8,000 - 14,000 cps 15,000 - 25,000 cps
Base Resin	**Base** **Accelerator**	Epoxy Amine
Color	**Base** **Accelerator**	White Amber
Net Weight (lb/gallon)	**Base** **Accelerator**	9.4 9.0
Mix Ratio (B:A)	**Volume** **Weight**	2:1 2:0 : 0.96
Worklife (72°F [23°C])		110 minutes

Curing

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

This adhesive will cure in 24 hours at room temperature. Heating will accelerate the cure and can result in a higher T_g than room temperature curing yields. Curing data is shown in the figure below.



Note: If the adhesive has become grainy or lumpy in appearance when dispensed, this may be due to crystallization of the adhesive. This can be corrected by heating the adhesive in the syringe to 120°F (49°C) for 30 minutes, then allowing the adhesive to cool before dispensing.

Typical Performance Characteristics[1]

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Shear and Peel Strength vs. Cure Temperature / Time

	72°F (23°C) 24 hours	120°F (49°C) 270 minutes	160°F (71°C) 90 minutes	200°F (93°C) 30 minutes	250°F (121°C) 10 minutes
Overlap Shear[2] (lbf/in^2) (ASTM D-1002-72)	> 5000	> 5000	> 5500	> 5500	> 5500
T-Peel[3] (lbf/in) (ASTM D1876-61T)	60[4]	59[4]	43[4]	39[5]	45[5]

[1] - See Technical Data Sheet 3M™ Scotch-Weld™ Epoxy Adhesive DP-460 for additional typical performance characteristics.

[2] - 0.060 inch thick, etched aluminum pulled at 0.10 inches/minute.

[3] - 0.032 inch thick, anodized aluminum pulled at 20 inches/minute.

[4] - Cohesive failure mode.

[5] - Adhesive failure mode.

Storage and Shelf Life

Storage: Store 3M™ Scotch-Weld™ Epoxy Adhesive DP-460 EG at 60-80°F (15-27°C) or refrigerate for maximum shelf life.

Shelf Life: 3M™ Scotch-Weld™ Epoxy Adhesive DP-460 EG has a shelf life of 15 months in its original container.

Certification/Recognition

MSDS: Refer to Product Label and Material Safety Data Sheet for Health and Safety Information before using this product. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

TSCA: This product is defined as an article under the Toxic Substances Control Act and therefore, it is exempt from inventory listing requirements.

RoHs Complaint/REACH Compliant: This product complies with the European Union's "Restriction of Hazardous Substances" (RoHs) initiative and with European REACH regulations 2002/95/EC and 2005/618/EC.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-251-8634. Address correspondence to: 3M, Electronics Markets Materials Division, 3M Center, Building 225-3S-06, St. Paul, MN 55144-1000. Our fax number is 651-778-4244 or 1-877-369-2923. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

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