



Technical Data Sheet

3M™ Scotch-Weld™ Instant Adhesive CA50 Gel



[Regulatory Info/SDS](#)

Product Description

3M™ Scotch-Weld™ Instant Adhesives are single component, high strength cyanoacrylate adhesives.

3M™ Scotch-Weld™ Instant Adhesive Gel CA50 is a high-strength, surface insensitive, gel cyanoacrylate adhesive. Its gel consistency allows it to be used in many non-sag vertical applications, and to fill gaps up to .020 inches. The very slow cure rate allows plenty of time to reposition parts. Meets CID A-A-3097, Type II, Class 5.

Product Features

- One component, high strength adhesives that cure at room temperature.
- Products provide varying cure times, bond strengths, and viscosities.
- Can be used to bond a variety of substrates including many rubbers, plastics, and metals.
- Economical to use as it requires only drops of adhesive to provide strong bonds to many metals, plastics, and rubbers.

Technical Information Note

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

Typical Uncured Physical Properties

Attribute Name	Value
Color	Clear ¹
Viscosity	20,000-50,000 cP
Net Weight	9 lb/gal
Base	Ethyl

¹ Colors may vary from nearly white to yellow/amber. Adhesive performance is not affected by color variation.

Typical Mixed Physical Properties

Attribute Name	Value
Time to Handling Strength	60 – 120 s

Typical Physical Properties

Attribute Name	Value
Specific Gravity	1.08 g/mL

Typical Performance Characteristics

Attribute Name	Value
Long Term Temperature Resistance	100 °C (212 °F) ¹
Minimum Long Term Temperature Resistance	-54 °C (-65 °F) ¹

¹ Long Term (day, weeks)

Handling/Application Information

Directions for Use

For short term storage (30 days), keep adhesive in a cool, dry place 60 to 80°F (16-27°C). For long term storage, refrigeration (40°F [4°C] or below) is suggested. Keep containers tightly covered and free of moisture. Polymerization is accelerated by sunlight, so avoid direct exposure to sun. One Ounce Bottles: At end of day, clear tip of dispensing nozzle by inserting a needle to prevent clogging. Wipe outside of nozzle to remove excess adhesive with a folded non-cotton cloth or tissue. Replace cap. One Pound Bottles: At end of day, remove cap-stem assembly and place overnight in nitromethane or methyl ethyl ketone.* Seal bottle with shipping cap.

*Note: When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use.

Surface Preparation

For optimum strength structural bonds, paint, oxide films, oils, dust, mold release agents and all other surface contaminants must be completely removed. However, the amount of surface preparation depends on the required bond strength and the environmental aging resistance desired by the user.

Metals (Steel and Aluminum):

1. Wipe free of dust with oil-free solvent such as acetone or isopropyl alcohol.*
2. Sandblast or abrade using clean fine grit abrasives.
3. Wipe again with solvent to remove loose particles.

Aluminum Etching:

1. Alkaline Degrease: Oakite 164 solution (9-11 oz./gallon water) at 190°F ± 10°F (88°C ± 5°C) for 10-20 minutes. Rinse immediately in large quantities of cold running water.
2. Acid Etch: Place panels in the following solution for 10 minutes at 150°F ± 5°F (66°C ± 2°C).
Sodium Dichromate 4.1 - 4.9 oz./gallon
Sulfuric Acid, 66°Be 38.5 - 41.5 oz./gallon 2024-T3 aluminum (dissolved) 0.2 oz./gallon minimum Tap water as needed to balance
3. Rinse: Rinse panels in clear running tap water.
4. Dry: Air dry 15 minutes; force dry 10 minutes at 150°F ± 10°F (66°C ± 5°C).
5. If primer is to be used, it should be applied within 4 hours after surface preparation.

Plastics/Rubber:

1. Wipe with Isopropyl Alcohol.*
2. Abrade using clean fine grit abrasives.
3. Wipe with Isopropyl Alcohol.*

*Note: When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use.

Industry Specifications

CID A-A-3097, Type II, Class 5

Storage and Shelf Life

Store in original containers at or below 27°C (80°F). These products can be expected to have a shelf life of at least 15 months from date of manufacture. At lower temperature, the shelf life will be longer. Lower temperatures cause increased viscosity of a temporary nature and also will cause water to condense on the container. Therefore, containers stored at low temperatures should be allowed to return to room temperature before opening so that water does not come in contact with the adhesive and cause adhesive gelation.

Precautionary Information

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

Automotive Disclaimer

Select Automotive Applications:

This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

Information

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