



Technical Data Sheet

3M™ Scotch-Weld™ Instant Adhesive CA40H



[Product Details](#)



[Regulatory Info/SDS](#)

Product Description

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

3M™ Scotch-Weld™ Instant Adhesive CA40H is a high-strength cyanoacrylate adhesive. It is a higher viscosity, slightly slower setting version of Scotch-Weld CA40. It has particularly good adhesion to many difficult to bond substrates, such as aluminum, EPDM rubber, and flexible vinyl. Scotch-Weld CA40H exhibits good resistance to soap solutions and isopropyl alcohol. Its high viscosity helps prevent run off during application, and its slower set time allows additional time for proper alignment of parts.

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	400 — 600 cP
Net Weight	8.7 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	5 — 40 s

Typical Physical Properties

Attribute Name	Value
Specific Gravity	1.05 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.

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

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Product Selection and Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the

product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

Disclaimer: 3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. Unless specifically stated otherwise on the applicable product packaging or literature, these products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature), and must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and limitations, and the user must take any action required under any recall, field action or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, or death. For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit www.3M.com.

3M™ Industrial Adhesives and Tapes Division
3M Center, St. Paul, MN 55144-1000
3M.com/iatd

3M and Scotch-Weld are trademarks of 3M Company.
©3M 2024 (6/24)