Technical Data Sheet

3M™ Scotch-Weld™ Low Odor Acrylic Adhesive DP810

Product Description

3M™ Scotch-Weld™ Low Odor Acrylic Adhesives are two-part, 1:1 mix ratio, toughened structural adhesives with less odor than most acrylic adhesives. These adhesives have excellent shear and peel strength along with good impact resistance and durability. They can quickly bond to most metals, ceramics, rubbers, plastics and wood with minimal surface preparation.

Product Features

- Tough, durable bonds
- Low odor acrylic adhesive
- Minimal surface prep
- 10 minute work life
- 20 minute time to handling strength
- 1:1 mix ratio
- Bonds stainless steel
- Excellent shear and peel strength

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

Property	Values	Additional Information
Base Color	Green	
Accelerator Color	White	
Base Viscosity	18000 to 22000 cP	View

Temp C: 23C
Temp F: 72F

Notes: Viscosity obtained by Brookfield, DV-II, #7 Spindle, 20 rpm

Accelerator Viscosity	18000 to 22000 cP	View

Temp C: 23C
Temp F: 72F

Notes: Viscosity obtained by Brookfield, DV-II, #7 Spindle, 20 rpm.

Base Resin	Acrylic	

Accelerator Resin	Acrylic
Base Net Weight	8.7 to 9.1 lb/gal
Accelerator Net Weight	8.7 to 9.1 lb/gal
Mix Ratio by Volume (B:A)	1:1
Mix Ratio by Weight (B:A)	1:1

Typical Mixed Physical Properties

Property	Values	Additional Information
Worklife	10 min	View

Temp C: 23C
Temp F: 73F

Set Time (min)	20 min	View

Temp C: 23C
Temp F: 73F

Notes: Minimum time required to achieve 50 psi of overlap shear strength. Cure times are approximate and depend on adhesive temperature.

Time to Full Cure	8 to 24 hr	View

Temp C: 23C
Temp F: 73F

Notes: Time to develop 80% of maximum overlap shear values.

Typical Performance Characteristics

Property	Values	Additional Information
T-Peel Adhesion	30 lb/in width	View

Test Method: ASTM D1876

Dwell/Cure Time: 6.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 73F
Substrate: Etched Aluminum

Notes: Peel tests on FPL etched, 0.032" gauge aluminum. 0.017in bondline. Jaw separation rate 20"/min.

Storage and Shelf Life

For maximum shelf life, store Duo-Pak cartridges and bulk containers at 32°F (0°C) to 40°F (4°C). Do not freeze. When stored at the recommended temperatures in the original unopened containers, this product has a shelf life of 12 months from date of manufacture when in cartridges, and 6 months from date of manufacture in bulk pails.

Automotive Disclaimer

Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, including, but not limited to, automotive electric powertrain battery or high voltage applications. This product does not fully adhere to typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility and may not meet a Ppk of 1.33 for all properties. The product may not undergo an automotive production part approval process (PPAP). Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property. No written or verbal statement, report, data or recommendation by 3M related to automotive use of the product shall have any force or effect unless in an agreement signed by the Technical Director of 3M's Automotive Division. Customer assumes all responsibility and risk if customer chooses to use this product in an automotive electric powertrain battery or high voltage application, and 3M will not be liable for any loss or damage arising from or related to the 3M product or customer's use of the product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity or recall costs), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability. In no event shall 3M be liable for any damages in excess of the purchase price paid for the product.
NOTWITHSTANDING ANY OTHER STATEMENT TO THE CONTRARY, 3M MAKES NO REPRESENTATIONS, WARRANTIES OR CONDITIONS WHATSOEVER, EXPRESS OR IMPLIED, REGARDING THE PRODUCT IF USED IN AN AUTOMOTIVE ELECTRIC POWERTRAIN BATTERY OR HIGH VOLTAGE APPLICATION, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY ON PERFORMANCE, LONGEVITY, SUITABILITY, COMPATIBILITY, OR INTEROPERABILITY, OR 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.

Bottom Matter

3M
Industrial Adhesives and Tapes Division
3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
800-362-3550

Trademarks

3M, Scotch-Weld and EPX are trademarks of 3M Company.

Handling/Application Information

Directions for Use

Apply adhesive to clean, dry substrates, which are free of paint, oxide films, oils, dust, mold release agents and all other surface contaminants. See the Surface Preparation section for specific substrate preparation method.

48.5 ml cartridge:.

Place Duo-Pak cartridge in 3M™ EPX™ Applicator. Remove cap. Dispense and discard a small amount of adhesive to assure even ratio and free flow. Clear orifice if necessary. Attach mixing nozzle. Apply adhesive to clean surfaces, join parts, secure until adhesive sets.

200/400 ml cartridge

While holding Duo-Pak cartridge in an upright position, remove and discard the insert from the cartridge by unscrewing plastic nut and removing metal washer. Place cartridge in a 1:1 200/400 ml EPX applicator. Dispense and discard a small amount of adhesive to ensure even ratio and free flow. Attach mixing and nozzle and secure with plastic retaining nut. Apply adhesive to clean surfaces, join parts, secure until adhesive sets.

Clean-up:

Excess adhesive can be removed with solvent such as MEK*. part or bond line can be removed with isopropyl alcohol.*

Edge tack on a finished

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

Heat Cure:

Full cure can be attained by raising the bondline temperature to 120°F (49°C) for 30 minutes or to 150°F (66°C) for 10 minutes.

Surface Preparation

3M™ Scotch-Weld™ Low Odor Acrylic Adhesives can bond oily metal, plastic and other substrates with very little surface preparation. However, for the most consistent results and environmental resistance,

all substrates should be clean, dry and free of paint, oxide films, dust, mold release agents and all other surface contaminants. The amount of surface preparation directly depends on the bond strength and environmental resistance desired by the user.

The following cleaning methods are suggested for common surfaces.

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 (180 grit or finer).

3) Wipe again with solvent to remove loose particles.*

4) If a primer is used, it should be applied within 4 hours after surface preparation (or see instructions pertinent to a specific primer).

Note: Aluminum may also be acid etched. Follow the manufacturer's precautions and directions for this procedure.

Plastic/Rubber

1) Wipe with isopropyl alcohol.*

2) Abrade using fine grit abrasives (180 grit or finer).

3) Remove residue by wiping again with isopropyl alcohol.*

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

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40066455/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=DP810

Precautionary Information

Refer to Product Label and 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.

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.