

Technical Data Sheet

3M™ Adhesive Sealant 740 UV

Product Description



3M™ 700-Series Silane Modified Polymer (SMP) Adhesive Sealant products are one component, moisture curing products which form permanent elastic bonds. They are similar in function as a typical one component polyurethane sealant but are isocyanate-free. 3M SMP Adhesive Sealants bond to a wide variety of materials including plastics, metals, fiberglass, and wood. Differentiated from other high performance sealants as they are very low VOC, have better UV resistance, and have broad substrate adhesion for a wide range of productivity enhancement applications.


Product Features

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 Physical Properties




| Property | Values | Additional Information |
|--|------------------------|--|
| Color | White Gray Black | |
| VOC | 22 g/L | |
| VOC | 0.18 lb/gal | |
| Approximate Coverage | 38 lineal m | View  |
| Notes: 10.5 oz. [310 mm Cartridge]; 1/8 in (3 mm) bead | | |
| Approximate Coverage | 126 lineal ft | View  |
| Notes: 10.5 oz. [310 mm Cartridge]; 1/8 in (3 mm) bead | | |
| Specific Gravity | 1.65 | |
| Water and salt spray resistance | Excellent | |
| Resistance to dilute acids and bases | Good | |

| | | |
|--------------------------------|--|--|
| Compatibility with paints | Water based: yes Solvent based: test beforehand | View  |
| Notes: Can be painted when wet | | |




Typical Uncured Physical Properties

| Property | Values | Additional Information |
|-------------|--------------|------------------------|
| Consistency | Medium Paste | |

Typical Mixed Physical Properties









| Property | Values | Additional Information |
|----------------------------------|-------------------|--|
| Tack Free Time | 40 to 60 min | View  |
| Test Condition: Room Temperature | | |
| Rate of Cure | >1/8 in per 24 hr | View  |
| Test Condition: Room Temperature | | |
| Rate of Cure | >3.5 mm per 24 hr | View  |
| Test Condition: Room Temperature | | |

Typical Cured Characteristics

| Property | Values | Additional Information |
|----------------------------|------------------------|--|
| Shore A Hardness | 30 | View  |
| Test Method: ASTM C661 | | |
| Modulus at 100% Elongation | >0.5 MPa | View  |
| Test Method: ASTM D412 | | |
| Modulus at 100% Elongation | >70 lb/in ² | View  |
| Test Method: ASTM D412 | | |

Typical Performance Characteristics

| Property | Values | Additional Information |
|----------|--------|------------------------|
|----------|--------|------------------------|

| | | |
|--|------------------------|--|
| Tensile Strength | 1.12 MPa | View  |
| Test Method: ASTM D412 | | |
| Tensile Strength | 165 lb/in ² | View  |
| Test Method: ASTM D412 | | |
| Stress at 100% Strain | 155 lb/in ² | View  |
| Test Method: ASTM D412 | | |
| Elongation at Break | 125 % | View  |
| Test Method: ASTM D412 | | |
| Long Term Temp C | 90 °C | View  |
| Test Condition: Long Term (day, weeks) | | |
| Minimum Long Term Temperature Resistance | -40 °C | View  |
| Test Condition: Long Term (day, weeks) | | |
| Long Term Temp F | 194 °F | View  |
| Test Condition: Long Term (day, weeks) | | |
| Minimum Long Term Temperature Resistance | -40 °F | View  |
| Test Condition: Long Term (day, weeks) | | |
| Application Temperature | 5 to 35 °C | |
| Application Temperature | 40 to 95 °F | |
| UV Resistance | Excellent | |

Product Certifications and Listings

Typical Environmental Performance

Long term exposure to temperatures greater than 212°F (100°C) will decrease tensile strength over time. Do not use these products in applications where the temperatures will continuously exceed 212°F (100°C).

Storage and Shelf Life

SMP sealants and adhesive sealants must be stored in a controlled environment to maximize shelf life. Store the products in the original unopened containers below 77°F (25°C).

When stored at recommended conditions, the shelf life is 15 months from date of manufacture.

Industry Specifications

[NFPA 130 test report for details \(ASTM E662\)](#)

[NFPA 130 test report for details \(ASTM E1354\)](#)

[NFPA 130 test report for details \(BSS 7239\)](#)

[NFPA 130 test report for details \(ASTM E162\)](#)

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.

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Bottom Matter

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

Trademarks

3M and Scotch-Brite are trademarks of 3M Company.

Handling/Application Information

Application Examples

Application Equipment

Cartridge and Sausage Pack:

A variety of applicators are available. Please contact your sales rep for assistance in selecting an applicator.

Bulk Dispensing:

A 46:1 ratio dual action piston pump with a ram is suggested. Actual equipment should be designed for your application based on the volume required. Please contact your sales rep or the technical service group to suggest equipment manufacturers (Graco: 1-877-844-7226 or www.graco.com).

Directions for Use

Surface Preparation:

Surfaces to be sealed or bonded should be clean and dry. Surfaces should be free from grease, mold release, oil, water/condensation, and other contaminants that may affect the adhesion of the sealant. Abrading with 180 to 220 grit abrasive followed by a solvent wipe will improve the bond strength. Suitable solvents include 3M™ Adhesive Remover, methyl ethyl ketone (MEK), isopropyl alcohol (IPA), or acetone.*

*When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe product directions for use and precautionary measures.

Refer to product label and MSDS for further precautions. Always pre-test solvent to ensure it is compatible with substrates.

Local and federal air quality regulations may regulate or prohibit the use of these products or surface preparation and cleanup materials. Consult local and federal air quality regulations before using these products.

Primer:

Use of a primer is an extra step and cost and will depend on substrates and the final end use. Using primer can improve the corrosion resistance of certain metals as well as improve the durability of the bond when exposed to high humidity conditions.

For most applications, high strength bonds on metal can be achieved without the use of a primer. Pre-testing for adhesion is suggested to determine if a primer is needed. Contact your 3M Technical Service representative for primer recommendation and application advice.

Application:

Loading the applicator gun: make sure the applicator is set up with correct plunger attachment for cartridge or sausage pack.

Metal Cartridge: Puncture seal in nozzle and remove the pull-tab seal at the bottom of the cartridge. Load into applicator and fix retaining ring (if applicable). Assemble the nozzle (if applicable) and cut to desired size and shape.

Plastic Cartridge: Cut off the top of the cartridge with a sharp blade, just above the area where the threads stop. Attach the nozzle and cut to desired size and shape.

Sausage Pack: Make a 1" slit close to the crimp on one end of the sausage pack. Load the sausage pack into the applicator barrel (slit side out). Place the rounded end of the supplied sausage nozzle onto the slit end of the sausage pack and fix with retaining ring. Cut nozzle to desired size and shape.

Product should be used within 24 hours after seal is punctured. Dispense product with the nozzle tip in contact with the substrate to insure good gap filling and substrate wetting. Bonding must occur within the first 50% of published skin time

Do not apply SMP sealants and adhesive sealants on frozen nor wet surfaces.

Do not apply over silicone nor in the presence of curing silicone or curing polyurethane. Avoid contact with uncured polyurethane during curing. Sealant can be tooled immediately after applying to give desired appearance.

Cleanup:

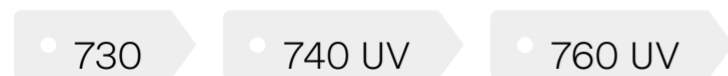
While sealant is still soft, cleaning can be done with the same solvents used for surface preparation. If sealant is already cured, removal is done mechanically with razor knife, piano wire, sanding or 3M™ Scotch-Brite™ Molding Adhesive and Stripe Removal Disc. This disc is available from 3M Automotive Aftermarket Division.

References

| Property | Values |
|-----------------------|---|
| 3m.com Product Page | https://www.3m.com/3M/en_US/p/d/b40066974/ |
| Safety Data Sheet SDS | https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=740 UV |

Family Group

Link Tags:



| Products | Long Term Temp F | Long Term Temp C | Color | Rate of Cure | Shore A Hardness |
|----------|------------------|------------------|-------|-------------------|------------------|
| 760 UV | 212 °F | N/A | N/A | N/A | N/A |
| 740 UV | 194 °F | N/A | White | >3.5 mm per 24 hr | 30 |
| 730 | N/A | 90 °C | Clear | >3.5 mm per 24 hr | 30 |

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

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 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.

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