700-Series SMP Products:

3M™ SMP Sealant 730, Clear

3M™ SMP Adhesive Sealant 740UV

3M™ SMP Adhesive Sealant 760UV

Technical Bulletin **June, 2016**

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.

Features/ Advantages

*All paints should first be tested for compatibility in application.

Features	3M™ 700-Series SMP Products:			Advantages
	730	740UV	760UV	
One component, moisture-curing	x	x	x	- No mixing - Simplifies production
Bonds dissimilar materials	x	x	x	- Gives design flexibility
Adheres to a wide variety of materials	x	x	x	- Multiple uses and design flexibility
Permanently elastic	x	x	x	- Provides long lasting bonds
Fast-skinning	x	x	x	- Speeds production
Paintable when wet*	x	x	x	- Improves appearance
High tensile strength	-	-	x	- Gives high strength bonds - Replace rivets and mechanical fasteners
Low Modulus, Low Shore-A hardness	x	x	-	- Ideal for sealing - Good for bonding materials with different coefficients of thermal expansion
High Modulus, High Shore-A hardness	-	-	x	- Gives high strength bonds
Cures Clear	x	-	-	- Improves appearance

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Application Ideas

Market	3M™ 700-Series SMP Products:		
	730	740UV	760UV
General Industrial	x	x	x
Construction	x	x	x
Specialty Vehicle	x	x	x
	Seals lap seams on trucks, trains, trailers, etc., and construction panels. Seals/Bonds well to most common substrates.		Bonds floors, exterior / interior panels, roofs for trucks, trains, trailers, vans, etc. Bonds well to most materials.

Technical Data

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

	3M™ 700-Series SMP Products:		
Properties	730	740UV	760UV
Tack-Free Time @ 73°F and 50% Relative Humidity	25 - 30 minutes	40 - 60 minutes	10 - 30 minutes
Rate of Cure @ 73°F and 50% Relative Humidity	>1/8" (3.5 mm) per 24 hour	>1/8" (3.5 mm) per 24 hour	>1/8" (3.5 mm) per 24 hour
Shore A Hardness (ASTM C661)	30	30	55
Tensile Strength (ASTM D412)	250 psi (1.7 MPa)	145 psi (1.0 MPa)	260 psi (1.8 MPa)
Elongation at Break (ASTM D412)	300%	>300%	>100%
100% Modulus (ASTM D412)	>80 psi (>0.6 MPa)	>70 psi (>0.5 MPa)	>145 psi (>1 MPa)
Service Temperature	-40°F - 194°F (-40°C - 90°C)	-40°F - 194°F (-40°C - 90°C)	-40°F - 212°F (-40°C - 100°C)
Specific Gravity	1.05	1.65	1.61
Consistency	Medium paste	Medium paste	Thick paste
VOC Content	11 g/l	22 g/l	13 g/l

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Typical Properties of 3M™ SMP Sealants / Adhesive Sealants

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Application Temperature	40°F - 95°F (5°C - 35°C)
Resistance to dilute acids and bases	Good
UV resistance	Excellent
Water and salt spray resistance	Excellent
Compatibility with paints Can be painted when wet	Water based: yes Solvent based: test beforehand
Approximate Coverage (10.5 oz. [310 mm Cartridge])	1/8" (3 mm) bead = 126 lineal feet (38 lineal meters)

Performance Data

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

Heat Resistance:

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).

Product Certifications and Listings

	3M™ 700-Series SMP Products:		
	730	**740UV**	**760UV**
NSF R2 Coating for Use on Structural Surfaces (Color specific)	–	(White and Gray only)	(White and Gray only)
Leadership In Energy and Environmental Design (LEED) Contributes to LEED credit	X	X	X

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.

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Application Equipment Suggestions

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).

Storage

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).

Shelf Life

When stored at recommended conditions, the shelf life is 12 months from date of manufacture.

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.

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product 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. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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ISO 9001:2008

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2008 standards.

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