

PERMATHANE®

SM7713 MS SILYL-MODIFIED ADHESIVE SEALANT

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION:

Permathane SM7713 MS is a single-component, moisture-cured, solvent-free, gun-grade, asphalt-compatible Silyl-Modified Adhesive Sealant exhibiting low modulus elastomeric properties with excellent performance. The sealant is designed to skin and cure rapidly providing outstanding UV Resistance and long-term durability. The sealant provides excellent adhesion over a wide variety of substrates.

ADVANTAGE:

- Asphalt Flashing Compatible conforming to AAMA Specification 713-08
- Excellent adhesion to a variety of substrates
- Dependable performance and durability
- Easy to gun, tool, and clean
- Accommodates ± 50% joint movement
- Permanently flexible, excellent weatherability
- Paintable once cured
- VOC Compliant to SCAQMD, CARB, and OTC
- Primerless adhesion to substrates including galvanized steel, aluminum, Galvalume®, Kynar 500®, wood, vinyl, and fiberglass. For concrete applications consult technical support.

TYPICAL USES:

Permathane® SM7713 MS is designed to seal construction joint details.

- Perimeter seals for windows, doors and other wall penetrations on vinyl, aluminum, wood and other materials including Asphalt-Flashing membranes.
- Waterproof rivet seams and roof rails
- Bonding sidewalls in RV's and trucks
- Sealing corner moldings, fabricated roof-lap seams, bumper assemblies, and body-to-cab joints in motor homes
- Sealing door hinges, skylights, and portholes
- Between construction materials of dissimilar expansion coefficients
- Sealing in butt/lap joints

SPECIFICATION CONFORMANCE:

- AAMA 713-08 Complaint (Asphalt-Flashing Compatible)
- TT-S-00230 C (Type II) Class A, Non-sag, One-Component
- ASTM C 920 Type S, Grade NS, Class 50, Use-NT, A, and O
- AAMA 808.3-10 (Exterior Sealing Compound)

TYPICAL PROPERTIES:

Property	Typical Value	Test Method
Peel Adhesion [^] :	31 pli	ASTM C794
Tensile Maximum:	180 psi (2.07 N/mm ²)	ASTM D412
Elongation:	950%	ASTM D412
Sag:	≤0.3 inch	ASTM C639
Hardness (Shore A):	35 ± 5 A	ASTM D2240
Service Temperature Range:	-40°F to 180°F, (-40°C to 85.2°C)	
Water Resistance:	Passes	AAMA 800
Flash Point:	>200°F (>93°C)	ASTM D56
Shelf Life:	12 months when stored at or below 80°F.	
Skin Time:	30 – 45 mins	
Cure Time:	3-4 Days	
VOC:	< 20.4 g/L	EPA Method 24
* Skin and cure times are dependent on temperature, humidity, and porosity of the substrates. The above times are based on a ¼" bead at 75°F and 50% relative humidity. Low humidity, cooler temperature, and non-porous substrates will lengthen these times. [^] Peel Adhesion: Glass – 38 pli, Aluminum - 35 pli, Vinyl – 31 pli, Concrete – 21 pli		

FOR ADHESION:

Due to the number and types of substrates available, pretesting for adhesion is recommended. Testing on samples of materials to which it will be applied is intended to eliminate potential field problems and help determine proper surface preparation.

APPLICATION:

Surface Preparation:

- Surfaces must be clean, dry, and free of oil or grease. Concrete and masonry surfaces must be free of foreign material, contaminants, water repellents, form oils, and laitance.
- Stone surfaces must be cohesively sound and free of contaminants. Granite, limestone, marble, and sandstone must be pre-tested for adhesion prior to sealant installation.
- Mill finish aluminum may contain an invisible oil film or oxide. Clean with Isopropyl Alcohol.
- Many high-performance coatings or unusual surface treatments may require abrasion of the surface with steel wool or fine emery paper during preparation. In cases where doubt exists, contact ITW Polymers Sealants North America, Inc. technical service for recommendations.

Joint Design:

- Sealant depth should not exceed joint width. Sealant depth should not be greater than ½ inch or less than ¼ inch.
- Use of closed cell polyethylene backer-rod approximately 25% larger than the width of the joint is recommended for deep joints. A bond-breaker film must be used in shallow joints to prevent three-sided adhesion.
- Do not puncture or prime the backer-rod.

Priming:

- It is expected that SM7713 MS will adhere and perform in uncontaminated joints with most common substrates, without the use of a primer.
- Vertical joints subjected to rain should perform without the need of a primer.
- Priming of masonry or other porous joints is recommended if exposed.

APPLICATION LIMITATIONS:

- SM7713 MS must not be applied to frost-bearing surfaces or if the temperature will be below freezing within 24 hours.
- Tooling techniques using solvents or soapy solutions are not recommended.
- All surfaces must be evaluated for adhesion prior to product acceptance.
- The suitability of this product, for each intended use, must be determined by the purchaser prior to acceptance.

Not recommended for:

- a) Continuous water immersion.
- b) Joints that are contaminated with grease, wax, corrosion, bitumen, or cement laitance.
- c) Horizontal joints in floors or decks where physical abuse is encountered.
- d) Special architectural finishes without proper testing.
- e) Use with Polyurethane overcoating

TOOLING:

Tooling of freshly applied sealant should be done in one continuous stroke. Tool the sealant with adequate pressure to spread the sealant against the back-up material and onto the joint surfaces. Excess sealant should be dry-wiped from all surfaces while still uncured. If joint surfaces have been masked, remove masking tape immediately after tooling. Cured sealant is very difficult to remove.

CLEAN UP:

Immediately remove all excess sealant smears adjacent to the joint with xylene, toluene, methyl ethyl ketone, or locally exempted solvents. Tools and application equipment may also be cleaned with the same solvents.

Note: The use of these solvents (or other solvents) may be hazardous to your health. Use only in well-ventilated areas. **KEEP AWAY FROM OPEN FLAME.** Read all labeling before use.

Follow solvent manufacturer's recommendations and instructions for safe handling.

PRECAUTIONS:

If this product is used in direct contact or in close proximity with any other sealant or elastomer, a compatibility test must be conducted by the purchaser or user prior to use. When applied in close proximity, neutral cure silicones will prevent SM7713 MS from curing. There will be no problem if either sealant is applied and allowed to cure prior to the application of the other. Use caution if applying the silicone first since SM7713 MS will not adhere to silicone or its residue.

Avoid skin and eye contact. On contact, uncured sealant could cause irritation to the skin and eyes. In case of eye contact, flush eyes with warm water for 15 minutes, call a physician. For skin contact remove sealant with a paper towel. If swallowed, do not induce vomiting, call a physician. **KEEP OUT OF REACH OF CHILDREN. This product is manufactured for industrial use only.**

FIRST AID:**KEEP OUT OF REACH OF CHILDREN.**

Avoid skin and eye contact. Avoid breathing of direct concentrated vapors. Use with adequate ventilation. In the case of eye contact flush eyes with warm water for 15 minutes, call a physician. For skin contact, remove sealant with a paper towel. If swallowed do not induce vomiting, call a physician. This product is manufactured for professional and industrial use only. Refer to the Safety Data Sheet (SDS) for further information. For medical emergency only call ChemTrec 1-800-424-9300

EXCLUSION OF WARRANTIES:

AS TO THE HEREIN DESCRIBED MATERIALS, ITW POLYMERS SEALANTS NORTH AMERICA, INC. MAKES NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SINCE THE USE OF THE HEREIN DESCRIBED MATERIALS INVOLVES MANY VARIABLES IN METHODS OF APPLICATION, HANDLING AND/OR USE, THE USER IN ACCEPTING AND USING THESE MATERIALS ASSUMES ALL RESPONSIBILITY FOR THE END RESULT. THE PURCHASE OF THIS ITW POLYMERS SEALANTS NORTH AMERICA, INC. PRODUCT IS SUBJECT TO THE TERMS AND CONDITIONS OF AN "AS IS" SALE, AND IF THE PRODUCT IS PROVED TO BE DEFECTIVE, THE EXCLUSIVE REMEDY, AT ITW POLYMERS SEALANTS NORTH AMERICA, INC.'S. OPTION, SHALL BE TO REPLACE THE DEFECTIVE ITW POLYMERS SEALANTS NORTH AMERICA, INC. PRODUCT. ITW POLYMERS SEALANTS NORTH AMERICA, INC. SHALL NOT OTHERWISE BE LIABLE FOR LOSS OF DAMAGES, WHETHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL, REGARDLESS OF THE LEGAL THEORY ASSERTED, INCLUDING NEGLIGENCE, WARRANTY OR STRICT LIABILITY.

Complete technical information is available from
ITW Polymers Sealants North America, Inc.