Technical Data Sheet

DOWSIL™ ALLGUARD Silicone Elastomeric Coating

Water-based silicone elastomer for waterproofing above-grade exterior masonry substrates

Features & Benefits

- Offers long-term waterproofing protection
- Maintains water protection properties even when exposed to sunlight, rain, snow, or temperature extremes

Composition

- One-component, pigmented, water-based silicone elastomer

Applications

- DOWSIL™ ALLGUARD Silicone Elastomeric Coating is designed to waterproof above-grade exterior masonry substrates, such as concrete block, fluted block, brick, stucco, synthetic stucco, poured concrete, precast concrete, exterior insulation finish systems (EIFS), and previously coated masonry substrates.

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Test[1]	Property	Unit	Result
ASTM D 2369	Solids Content	% by weight % by volume	58.6 50.1
ASTM D 1475	Specific Gravity	lb/gal (kg/L)	9.64 (1.155)
ASTM D 2196	Viscosity[2]	cps (Pa s)	37,500 (37.5)
ASTM D 1849	High Temperature Stability (no change in viscosity)	days	> 28
EPA Method 24	Volatile Organic Content[3] (VOC)	g/L (lb/gal)	< 50 (< 0.42)
	As Cured		
ASTM D 2240	Durometer Hardness, Shore A	points	38
ASTM D 412	Tensile Strength	psi (MPa)	> 145 (1.00)
ASTM D 412	Elongation	%	600
ASTM D 1653	Permeance	English perms (ng/(m^2.Pa.s))	43.2 (2480)

1. ASTM: American Society of Testing and Materials.
   EPA: Environmental Protection Agency
2. Brookfield HAV, spindle #3, 2 rpm.
3. VOC includes all approved colors (EPA method 24 or 40 CFR 59.406 data).

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Typical Properties (Cont.)

Test	Property	Unit	Result
ASTM D 522	Room Temperature, Flex, 1/8" mandrel		Pass
ASTM C 711	Low Temperature Flex, 1/4" mandrel		Pass
ASTM D 3274	Fungus Resistance		No growth
ASTM D 6904	Wind Driven Rain[4]		Pass
ASTM D 2243	Freeze/Thaw Resistance		No Change

4. Measured on coating system with two coats (10 mil dry film thickness) of DOWSIL™ ALLGUARD Silicone Elastomeric Coating.

Description

DOWSIL™ ALLGUARD Silicone Elastomeric Coating is a one-part, 100% water-based silicone elastomer supplied in three tint bases for pigmenting at distributor locations. The coating is typically applied in two coats. The use of DOWSIL™ ALLGUARD Primer may be necessary based on the substrate. The coating can be roller, brush, or spray applied. It cures to form a flexible membrane that is impervious to water but has the ability to "breathe," allowing water vapor to escape from inside the substrate. Its matte finish minimizes brush and roller marks. The coating offers long-term waterproofing protection, withstanding hurricane-force, wind-driven rain; normal movement imposed by seasonal thermal contraction and expansion; ultraviolet (UV) radiation; and the elements. The coating maintains its water protection properties even when exposed to sunlight, rain, snow or temperature extremes.

Once pigmented, it is a ready-to-use material that can be applied between -6°C (20°F) and 38°C (100°F) to a clean, dry surface. The average drying time is 4 to 8 hours, depending upon temperature, humidity, and wind conditions. If the temperature drops below -6°C (20°F) after the coating is applied, the average drying time will increase. DOWSIL™ ALLGUARD Elastomeric Coating requires temperatures higher than -6°C (20°F) for a cumulative total of 24 hours to dry.

DOWSIL™ ALLGUARD Silicone Elastomeric Coating will attain full adhesion and physical properties in 7 to 14 days.

DOWSIL™ ALLGUARD Silicone Elastomeric Coating is available in more than 55 standard colors or can be custom colored to order.

How to Use

When properly applied and cured, DOWSIL™ ALLGUARD Silicone Elastomeric Coating offers a fast, easy, and effective method of keeping exterior above-grade surfaces waterproof.

Design Considerations

In many building designs, areas such as ledges and windowsills allow airborne dirt and soot to accumulate. Surfaces exposed to concentrated water run-down may appear dirty or streaky over time and the coating may become difficult to clean. In those areas, drip edges should be installed before the coating is applied to rechannel water away from the surface to protect the long-term appearance of the façade.

How to Use (Cont.)

Design Considerations (Cont.)

The success of a drip edge is achieved by moving the runoff water away from the wall onto the drip edge, creating a non-uniform runoff.

A drip edge can be fabricated from the same material as the windowsills or from other formable composites. The drip edge can be mechanically adhered to the substrate or attached with DOWSIL™ 795 Silicone Building Sealant (see Figure 1).

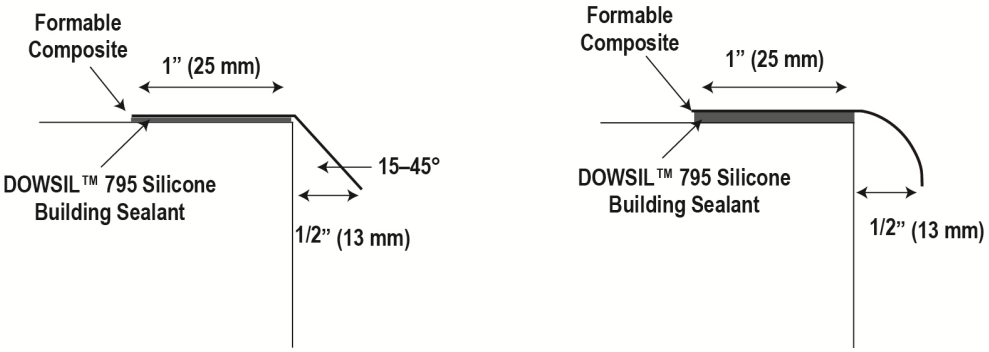


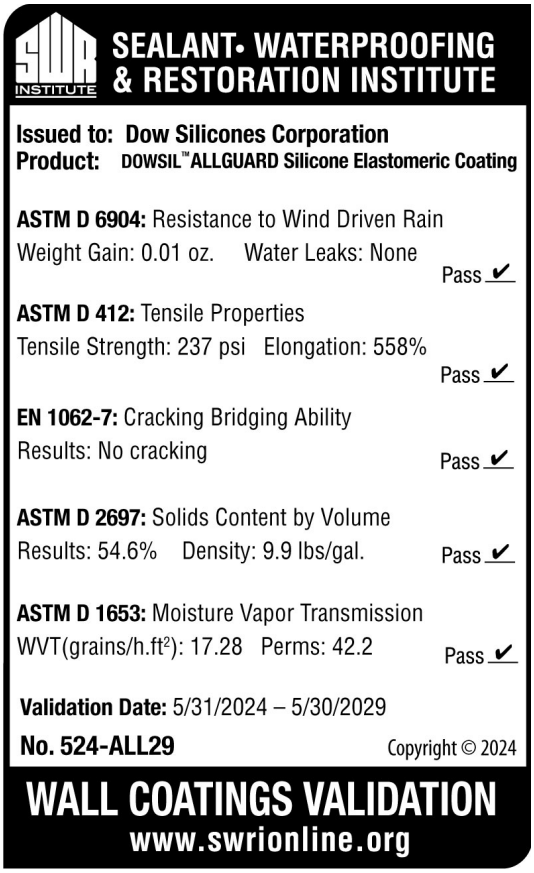
Figure 1: Drip Edge Design Consideration

Surface Preparation

All surfaces to be coated with DOWSIL™ ALLGUARD Silicone Elastomeric Coating must be prepared as described in the most recent DOWSIL™ ALLGUARD Silicone Elastomeric Coating Application and Maintenance Guide (Form No. 62-617). The following is a short reference guide for surface preparations.

All surfaces must be clean and free of dirt, frost, dust, oil, grease, mold, fungus, efflorescence, laitance, peeling coating, chalking coating, and any other foreign material. Green concrete must be allowed to cure 28 days before application of DOWSIL™ ALLGUARD Silicone Elastomeric Coating (see "Limitations"). Pressure clean, wire brush, or grind the wall surface to remove all of the above materials. Repair any damaged concrete, stucco, block, brick, masonry, or EIFS. Repair cracks larger than 1/16" (1.6 mm) with a material that is compatible with the substrate and DOWSIL™ ALLGUARD Silicone Elastomeric Coating. DOWSIL™ 790 Silicone Building Sealant or DOWSIL™ 795 Silicone Building Sealant or DOWSIL™ 791 Silicone Weatherproofing Sealant can be used for crack repairs.

How to Use (Cont.)



Coating

A minimum of two coats of DOWSIL™ ALLGUARD Silicone Elastomeric Coating are necessary to achieve the required 10 mil (0.25 mm) minimum dry film thickness to attain protection against through-water penetration and to qualify for a project-specific warranty.

Apply the coating in a 10 mil (0.25 mm) wet thickness (a job-specific mockup is recommended to determine actual usage). Due to DOWSIL™ ALLGUARD Silicone being 50% solids, two thick wet coats (10- to 12-mil [0.25 to 0.30 mm]) will result in the required 10-mil (0.25 mm) dry coating thickness. On occasion, a third coat may be necessary on porous or rough surfaces to achieve the minimum dry film thickness.

Apply using a ¾ to 1½" (19 to 38 mm) nap, polyester, or 50/50 polyester/wool blend roller cover, nylon bristle brush, or airless sprayer. When applying the coating with a roller, apply it in a fan pattern to achieve uniform thickness. Always finish roller applications in the same direction to reduce visual surface texture differences. When applying with an airless sprayer, follow the spray application with a back roll of material to help ensure a uniform coating and appearance.

Allow the coating to dry (typically 2 to 4 hours) before applying additional coats. Note: Do **not** thin or cut back DOWSIL™ ALLGUARD Silicone Elastomeric Coating.

After the additional coat has been applied, the average drying time is 4 to 8 hours, depending upon temperature, humidity, and wind conditions. DOWSIL™ ALLGUARD Silicone Elastomeric Coating will attain full adhesion and physical properties in 7 to 14 days.

How to Use (Cont.)

Low Temperature Application
If temperatures drop below -6°C (20°F), the coating will freeze on the surface until the temperature increases. This will not affect the cured properties of the coating but will extend the drying time.

The coating should be dry to touch, not simply freeze between coats. Application equipment such as rollers and the tips of spraying equipment should be kept above 0°C (32°F) when not in use.

DOWSIL™ ALLGUARD Silicone Elastomeric Coating was developed to obtain good adhesion to the substrate without the need of a primer. To verify that this adhesion is sufficient, field adhesion tests must be performed as described in the DOWSIL™ ALLGUARD Silicone Elastomeric Coating Application and Maintenance Guide. If adhesion does not conform to requirements, a field adhesion test with primer should be performed. To obtain a project-specific warranty, field adhesion testing, conforming to the requirements, must be performed and documented. Surface adhesion tests on each type of substrate and each face of the structure must be field adhesion tested and acceptable per the DOWSIL™ ALLGUARD Silicone Elastomeric Coating Application and Maintenance Guide.

Maintenance
Walls should be inspected at least once a year. If coating becomes damaged, repair damaged portion to maintain weatherproofing performance. Any touch-ups or repairs to the coating can be completed by applying DOWSIL™ ALLGUARD Silicone Elastomeric Coating to the clean, dry area in accordance with the recommendations in this data sheet and the DOWSIL™ ALLGUARD Silicone Elastomeric Coating Application and Maintenance Guide.

Dow recommends routine cleaning to minimize dirt accumulation, following these guidelines:

1. Abrasive cleaners and cleaning equipment should never be used.
2. Clean using pressurized water and a basic cleaning agent such as TSP (Trisodium Phosphate)[1] or Simple Green. Water pressure should not exceed 1,500 psi (10.3 MPa) to clean the surface without removing the coating material from the wall surface. A small test patch should be done first to determine how long the cleaning agent should be left on the surface before rinsing.
3. Removal of stubborn marks may require the use of a soft bristle brush with the cleaning solution. Avoid stiff brushes that may abrade the coating.

[1]Follow solvent manufacturer's recommended safe handling instructions and applicable federal, state, and local laws.

Recoating
Dow offers a 10-year extended waterproofing performance warranty for reapplication (one 14-mil wet coat/7-mil dry coat) after the initial warranty period, subject to terms and restrictions.

Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

Usable Life and Storage

Protect DOWSIL™ ALLGUARD Silicone Elastomeric Coating and DOWSIL™ ALLGUARD Primer from freezing. Store in a cool, dry place out of the weather. When properly stored in its original, unopened container above 1°C (34°F) and below 32°C (90°F), DOWSIL™ ALLGUARD Silicone Elastomeric Coating and DOWSIL™ ALLGUARD Primer have shelf lives of 9 months and 18 months, respectively, from date of manufacture. Refer to product packaging for "Use by Date."

If DOWSIL™ ALLGUARD Silicone Elastomeric Coating is stored at temperatures below -6°C (20°F) for longer than 8 hours, the coating will start to freeze. Allow the DOWSIL™ ALLGUARD Silicone Elastomeric Coating to sit at temperatures greater than 20°F for at least 8 hours or until the material thaws before application.

Packaging Information

DOWSIL™ ALLGUARD Silicone Elastomeric Coating and DOWSIL™ ALLGUARD Primer are available in 5 gal (19 L) pails (42 to 46 lb [19 to 21 kg] per pail depending on color).

Limitations

DOWSIL™ ALLGUARD Silicone Elastomeric Coating should **not** be applied:

- When there is a threat of rain within the next 24 hours or the relative humidity is in excess of 90% (because conditions would not permit complete surface drying)
- On below-grade applications
- On non-masonry substrates such as metal, wood, plastic, or asphaltic materials, or on tar-contaminated masonry
- As a decorative paint (DOWSIL™ ALLGUARD Silicone Elastomeric Coating is not warranted for aesthetics)
- On newly applied or green cementitious materials; industry guidelines recommend at least 28 days' cure before painting or coating the substrates (see SSPC, 2010 Painting Manual, Chapter 3.1. Concrete Surface Preparation)

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

Health and Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, **dow.com**, or consult your local Dow representative.

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

dow.com

NOTE: DOWSIL™ ALLGUARD Silicone Elastomeric Coating is NOT warranted for use on single-family residential dwellings.

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