

## Silicone II\* Aluminum & Metal Premium Waterproof Silicone

100% Silicone Sealant

### PRODUCT DESCRIPTION

Silicone II\* Aluminum & Metal is a silicone sealant that provides superior adhesion and premium performance, particularly in damp and wet environments. Silicone II\* Aluminum & Metal sealant is a one-component, non-corrosive neutral cure silicone and may be suitable for use on a wide variety of materials commonly found in the installation of windows, gutters, roofs, sheds, and other construction applications. Silicone II\* Aluminum & Metal sealant contains BIOSEAL mold and mildew product protection guarding the cured sealant against mold and mildew. Silicone II\* Aluminum & Metal sealant is supplied as a paste and upon cure produces a durable, formed-in-place long-lasting silicone rubber seal, Silicone II\* Aluminum & Metal is permanently waterproof.

### THREE-HOUR RAIN-READY

Caulk has to have enough time to build adhesion to the surface and cure or dry adequately so it won't wash away when exposed to water. That means if rain is in the forecast, homeowners and pros typically will have to delay or cancel a project when using most caulks. If not, the rain might wash the caulk away and the job will have to be redone. Silicone caulk, such as GE Silicone II\* Aluminum & Metal, develops strength and adhesion quickly so it can be exposed to water in as little as three hours. Some caulk requires up to 24 hours or longer before it is exposed to water. For homeowners trying to squeeze home maintenance projects into the weekend or pros who are looking to move to the next job, GE Silicone II\* can decrease the waiting time, helping increase convenience, speed, and efficiency.



### SUN-/FREEZE-PROOF

The outside of a home is exposed to harsh outdoor elements throughout the year. Extreme heat, the sun's UV-rays, and freezing temperatures can cause acrylic caulk to lose its flexibility and degrade. The permanent flexibility of GE Silicone II\* keeps it from breaking down so it can protect a home over time. Acrylic caulk can crack and crumble over time, leaving gaps for water to run through, resulting in improper drainage off a home.

# PRODUCT DATA SHEET



## WHY 100 PERCENT SILICONE?

Unlike acrylic, **silicone** is *permanently*:

- **Waterproof**—Acrylic breaks down in water over time.
- **Flexible**—Acrylic becomes less flexible and can even freeze at low temperatures, making it more likely to crack.
- **Shrink-proof**—Acrylic shrinks as the caulk dries. This shrinking can cause cracks over time.
- **Crack-proof**—Acrylic hardens, cracks, and crumbles over time when exposed to extreme heat and the sun's UV rays.

## PRODUCT ATTRIBUTES:

- **Silicone Durability** - Cured silicone provides excellent resistance to natural weathering, humidity and high & low temperatures with negligible change in elasticity, unlike acrylic caulk.

- **Shrinkage** – Unlike acrylic caulks, Silicone II sealant will not shrink or crack.

- **Fast Cure Time** – Tack free in 30 minutes and full cure of many common bead sizes in 24-48 hrs minimizing wait time before placing into use.

**Adhesion** - Primerless adhesion to many substrates and finishes. May be considered a candidate for use with numerous materials, including: glass, ceramic, porcelain, tiles, stainless steel, vinyl, anodized aluminum, masonry, wood, and many plastic and composite materials.

- **+/-25% movement capacity** – Can accommodate 25% movement in both extension and compression and has excellent recovery after cycling.

- **Stable Consistency (uncured state)** - Supplied as a lightweight paste the consistency of which remains relatively unchanged over a wide temperature range. The paste can be easily gunned and tooled under hot and cold conditions.

- **Thermal Stability (cured state)** - Once cured, the material properties remain fully elastic over a range of -55°F (-48°C) to 400°F (204°C).

- **Low Sag or Slump** – Useful for application to horizontal, vertical or overhead surfaces.

## NAHB GREEN APPROVED

Silicone II\* Aluminum & Metal caulk has received the NAHB Research Center National Green Building Certification. **It is the first, and currently the only, caulk to attain the certification.**



This NAHB Research Center **Green Approved** mark is your assurance that a product is eligible for points toward National Green Building Certification.

Visit [www.GreenApprovedProducts.com](http://www.GreenApprovedProducts.com) for details.

**TYPICAL USES:** Steel sheds, metal roofs, trailers, recreational vehicles, gutters and other metal surfaces.

**ADHERES TO:** Most aluminum, stainless steel, masonry, brick, concrete, granite and metal.

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## Packaging:

Silicone II\* Aluminum & Metal sealant is available in 9.8 fl. oz. (290 ml) plastic caulking cartridges. Cartridges are available with fixed nozzles. Plastic cartridges and squeeze tubes are packaged as 12 units in cardboard boxes. Cartridges are dispensed using a single component hand or air-pressured caulking gun.

## Silicone II\* Aluminum & Metal

Grade	Color	Product UPC	Size	Carton Size
GE5050	Aluminum	077027050509	9.8 fl oz	12 each
GE285	Aluminum	077027002850	2.8 fl oz	12 each

## COVERAGE:

Package Size	Length of Bead *
9.8 FL OZ	50 ft.
2.8 FL OZ	13ft.

\*3/16" Bead Size

## INSTALLATION:

Sealants may not adhere or maintain long-term adhesion to substrates if the surface is not prepared and cleaned properly before sealant application. Using proper materials and following prescribed surface preparation and cleaning procedures is vital for sealant adhesion.

## SURFACE PREPARATION:

- Surfaces must be clean, dry and sound prior to application of the sealant. All contaminants, impurities, or other adhesion inhibitors (such as moisture/frost, oils, old sealants, soaps and other surface treatments, etc.) must be removed from the surfaces to which the sealant is intended to adhere.
- For cleaning, a solvent-dampened clean rag usually produces the desired result. Isopropyl Alcohol (IPA) is a commonly used solvent and has proven useful for most non-porous substrates. When handling solvents, refer to manufacturer's MSDS for information on handling, safety and personal protective equipment.
- Architectural coatings, paints and plastics should be cleaned with a solvent approved by the manufacturer of the product or which does not harm or alter the finish.
- Since porous materials can absorb and retain moisture, it is important to confirm that substrates are dry prior to application of the sealant.
- Cleaning of surfaces should be done within 1 to 2 hours of when the sealant is to be applied.

## MASKING:

The use of masking tape is recommended where appropriate to ensure a neat job and to protect adjoining surfaces from over-application of sealant. Masking tape should be removed immediately after tooling the sealant and before the sealant begins to skin over (tooling time).

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## METHOD OF APPLICATION:

1. Remove dirt, grease, moisture, and old caulk from area to be sealed. Use backer rod for gaps larger than 1/2" x 1/2".
2. Cut nozzle to obtain desired bead size & pierce inner foil seal.
3. Using caulk gun, apply caulk into gap. Smooth the caulk into the gap.
4. Wipe hands & tools thoroughly before washing.
5. Allow at least 60 minutes before exposing caulk to water (see below). Not for use below the water line, where FDA compliance is necessary, or in aquariums.

## SEALANT APPLICATION:

- Apply sealant in a continuous operation applying a positive pressure adequate to properly fill and seal the seam, cavity or joint.
- Tool or strike the sealant with a concave tool, applying light pressure to spread the material against the joint surfaces to ensure a void-free application.
- When tooling, use care not to spread the sealant over the face of the substrates adjacent to the joint or masking as the silicone can be extremely difficult to remove on rough or porous substrates. Excess sealant should be cleaned from glass, metal and plastic surfaces while still uncured. On porous surfaces the excess sealant should be allowed to progress through the initial cure or set-up. It should then be removed by abrasion or other mechanical means.
- Sealant application is not recommended when the temperature is below 40°F (4°C) or if frost or moisture is present on the surfaces to be sealed.
- Application of Silicone II\* Aluminum & Metal is not recommended to surfaces above 120°F (49°C).
- The cure rate of this product is dependent upon temperature and the availability of atmospheric moisture. Under Standard Conditions (relative humidity of 50 ±5% at an air temperature of 73.4 ±2°F [23 ±1°C]) this material can attain a cured thickness of 2-3 mm per 24 hours (assuming ample access to atmospheric moisture). As temperature decreases, the cure rate slows down (and vice versa). Low moisture environments will also reduce the cure rate. Near-confined spaces, which limit the overall access to atmospheric moisture, will cure only from that surface which has access to the atmosphere.

# PRODUCT DATA SHEET

## TYPICAL PROPERTIES:

Typical property values of Silicone II\* Aluminum & Metal sealant as supplied and cured are set forth in the tables below. Typical product data values should not be used as specifications.

## TYPICAL PROPERTIES INFORMATION – SUPPLIED

Property	Value <sup>(1)</sup>	Test Method
Consistency	Paste	
VOC (ex. water & exempt)	28 g/l	WPSTM C1454
Odor	Ammonia	
Work Life (tooling time)	5-10 minutes	
Tack Free Time (@ 72°F (22°C), 50% RH)	20-30 minutes	ASTM C679
Sag/Slump	0.1" max	ASTM D2202

## TYPICAL PROPERTIES – CURED

Property	Value <sup>(1)</sup>	Test Method
Hardness, Durometer (Type A Indenter)	20	ASTM D2240
Ultimate Tensile Strength	213 psi (1.5 Mpa)	ASTM D412
Ultimate Elongation	347 %	ASTM D412
Specific Gravity	1.02	
Joint Movement Capability	+/-25%	ASTM C719
Service Temperature Range (after cure)	-55°F to +400°F (-48°C to 204°C)	
Weathering and U.V. Resistance	Excellent	20 yr. Study
Cure Time (1/4" or 6mm deep section) @ 75 °F (24°C) 50% RH	2-3 days	
Not Paintable		
Freeze Thaw Stable		

<sup>(1)</sup> Average value. Actual value may vary.

## APPLICABLE STANDARDS:

Silicone II\* Aluminum & Metal sealant meets or exceeds the requirements of the following specifications:

### American Society for Testing & Materials International

- ASTM C920 Standard Specification for Elastomeric Joint Sealants; Type S, Grade NS, Class 25, Use A, G, O

### U.S. Federal Specifications: (cancelled Sept. 1996)

- TT-S-001543A Sealing Compound: Silicone Rubber Base (for Caulking, Sealing & Glazing in Buildings and Other Structures)
- TT-S-00230C Sealing Compound: Elastomeric Type, Single Component (for Caulking, Sealing & Glazing in Buildings and Other Structures)

### Canadian General Standards Board (inactive)

- CGSB-19.13-M87 Sealing Compound, One-Component, Elastomeric, Chemical Curing
- CGSB-19.22-M89 Mildew-Resistant Sealing Compound for Tubs and Tiles

# PRODUCT DATA SHEET

## **SUGGESTED REFERENCES:**

In addition to the guidelines provided on this datasheet, Momentive Performance Materials recommends that designers and users of Silicone II\* Aluminum & Metal familiarize themselves with the latest editions of following industry guidelines and best practices:

- 1.) ASTM C1193 Standard Guide for Use of Joint Sealants.

## **PRODUCT SAFETY, HANDLING AND STORAGE:**

Customers considering the use of this product should review the latest Material Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Material Safety Data Sheets are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any Momentive Performance Materials representative. Use of other materials in conjunction with Momentive Performance Materials products (for example, primers) may require additional precautions. Please review and follow the safety information by the manufacturer of such other materials.

## **PATENT STAUS:**

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

## **LIMITATIONS:**

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular application.

## **Silicone II\* Aluminum & Metal sealant is not recommended:**

- For structural repairs.
- For use underwater or in other applications where the product will be in continuous contact with water.
- For use in food contact applications.
- When painting of the cured sealant is desired.
- For use on aquariums.
- For use on surfaces with special coatings, such as mirrors, without approval of the manufacturer of the article.

## **Silicone II\* Aluminum & Metal sealant should not be applied or used:**

- Under exceedingly hot or cold conditions (see Sealant Application section for additional information).
- On wet, damp, frozen or contaminated surfaces.
- On excessively basic or acidic substrates.

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## PRECAUTIONS:

- This material requires atmospheric moisture to cure from paste to rubber and may not attain its listed final cured rubber properties when used in designs or applications where the silicone is encapsulated and without access to atmospheric moisture.
- Some materials that bleed plasticizers or oils can cause a discoloration on the surface of sealants. When sealing to or over items such as: rubberized gaskets, bituminous-based materials, butyl or oil-based products, oily woods, tapes, etc., we recommend that compatibility testing be performed prior to use to confirm the suitability of the use of these materials when in contact with each other.
- Silicone materials are hydrophobic in nature and if inadvertently over-applied onto adjacent joint surfaces (even if removed immediately), can create a waterproofing effect of a substrate when the substrate is wet. See section on Masking.

## WARNING:

UNCURED PRODUCT CAUSES IRRITATION TO EYES, RESPIRATORY SYSTEM AND SKIN. MAY CAUSE HEADACHE, DIZZINESS, AND NAUSEA. Acetic acid released during cure. Avoid breathing vapors. Wear skin and eye protection. In case of contact with eyes, immediately flush with water. If irritation persists, get medical attention. Remove contact lenses before using. Do not touch contact lenses until all sealant is cleaned from fingers and nails. Contains methyltriacetoxysilane and octamethylcyclotetrasiloxane which may cause adverse liver and reproductive system effects in animals. May be harmful if swallowed. For health information, see Material Safety Data Sheet or call 518-237-3330. KEEP OUT OF REACH OF CHILDREN.

## LIFETIME GUARANTEE:

Limited Warranty - Manufacturer warrants the performance of this product to Manufacturer's indicated performance properties for as long as you own your home if properly stored, used and applied. If not satisfied, return proof of purchase for refund. Manufacturer shall not be liable for damages in excess of the purchase price. This is the sole and exclusive remedy/liability for product defects/failure. **THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS.** You may also have other rights that vary from state to state, so the above limitations/exclusions may not apply to you.

# PRODUCT DATA SHEET

## Emergency Service

Momentive Performance Materials maintains an around-the-clock emergency service for its products. The American Chemistry Council (CHEMTREC) and CareChem24 International also maintain an around-the-clock emergency service for all chemical products:

Location	Momentive Performance Materials Products	All Chemical Products
Mainland U.S., Puerto Rico	518.233.2500	CHEMTREC: 800.424.9300
Alaska, Hawaii	518.233.2500	CHEMTREC: 800.424.9300
Canada	518.233.2500	CHEMTREC: 800.424.9300
Europe	+518.233.2500 (Albanian, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbo-Croatian, Slovak, Spanish, Swedish, Turkish, Ukrainian)	+44.(0)208.762.8322 (UK)
Middle East, All countries, except Israel	+518.233.2500	+961.3.487.287 (Lebanon)
Middle East, Israel	+518.233.2500	+44.(0)208.762.8322 (UK)
Latin America, Asia/Pacific, all other locations worldwide	+518.233.2500	CHEMTREC: +1-703.527.3887 (collect)
At sea	Radio U.S. Coast Guard, which can directly contact Momentive Performance Materials at 518.233.2500 or CHEMTREC at 800.424.9300.	

DO NOT WAIT. Phone if in doubt. You will be referred to a specialist for advice.

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