



GE Iron Grip* 100% Silicone Adhesive clear

Product Description

GE Iron Grip 100% Silicone Adhesive sticks where other construction adhesives won't, bonding to both **porous & non-porous surfaces**. Iron Grip adhesive provides up to 75% less clamp time than traditional construction adhesives. Iron Grip adhesive **does not contain isocyanates** and is **low VOC**, making it appropriate for interior and exterior use. It is supplied as a paste and upon cure produces a durable, formed-in-place waterproof bond.

Why Iron Grip Adhesive?

Sticks Where Others Won't

Iron Grip adhesive doesn't require any surface preparation and bonds to both porous & non-porous surfaces such as: most aluminum, steel, PVC, fiberglass, polystyrene, glass, concrete, plywood, drywall, ceramic, porcelain, stone, granite, laminate, polycomposite, treated & untreated wood, MDF and masonry.

75% Less Clamp Time

No more waiting for an adhesive to take hold. Grip and adhesion typically begin to build in 10 seconds and parts are repositionable for up to 5 minutes. Parts may be clamp-free in as little as 6 hours with relative humidity minimum 40% and temperature minimum 65°F. Depending on weight and other factors, objects may not require clamping or are clamp-free in 30 minutes or less.



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Products

GE Iron Grip* 100% Silicone Adhesive

Safe for Interior and Exterior Use – No Isocyanates

Unlike polyurethane adhesives, Iron Grip adhesive does not contain potentially harmful isocyanates and is low-VOC, making it an excellent choice for interior and exterior use.

Unlike acrylic and polyurethane adhesives, **silicone** is:

- **Compatible with both Porous & Non-Porous Surfaces** – Acrylics often require one porous surface while polyurethanes call for the addition of water spray in dry conditions and for bonding two non-porous surfaces.
- **Permanently shrink-proof & crack-proof** – Higher modulus non-silicone adhesives are much harder and cannot withstand motion, which causes them to crack and put stress on the bond line.
- **Permanently waterproof** – Acrylic breaks down in water over time. Iron Grip adhesive typically reaches full cure and full strength in 24 hours and may be exposed to water in as little as 30 minutes, unlike non-silicone alternatives that may need up to 14 days to cure and up to 7 days before water resistance is developed.

In addition, Iron Grip adhesive has attained GREENGUARD Certification: UL 2818 - GREENGUARD Certification Program For Chemical Emissions For Building Materials, Finishes And Furnishings. GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg.



Iron Grip Adhesive

Grade	Color	Product UPC	Size	Carton Size	Coverage (3/16" bead)
M90058	Clear	077027900583	10.1 fl. oz.	12 each	51 Linear Feet

Installation

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

Surface Preparation

- Surfaces must be thoroughly clean and dry prior to application of the adhesive. All contaminants, impurities, or other adhesion inhibitors (such as moisture/frost, oils, old sealants, soaps and other surface treatments, etc.) must be removed from all bonding surfaces.

Product Attributes

- **Fast Adhesion** – Fast, primerless adhesion to many substrates and finishes including most aluminum, steel, PVC, fiberglass, polystyrene, glass, concrete, plywood, drywall, ceramic, porcelain, stone, granite, laminate, polycomposite, treated & untreated wood, MDF and masonry.
- **30 Minute Water-Ready†** – The adhesive can be exposed to water in as little as 30 minutes and it will not wash away.
- **Waterproof, Flexible, Shrink-/Crack-Proof** – Once cured, Iron Grip adhesive will remain flexible and will not shrink, crack, break down or wash away even when exposed to harsh weather such as extreme heat or freezing temperatures.
- **Stable Consistency (uncured state)** – Supplied as a lightweight paste offering relatively unchanged consistency over a wide temperature range, it 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 -50°F to 300°F (-45.5°C to 148.8°C).
- **Low Sag or Slump** – Useful for application to horizontal, vertical or overhead surfaces.

† Maximum bead size of 3/16", minimum 65°F, minimum humidity 50%. Otherwise, caulk should not be exposed to water within 8 hours after application. Do not touch for 24 hours.

Typical Uses: Tiles, Showers, Countertops, Tub Surrounds, Windows, Siding, Baseboards, Crown Molding, Backbedding

Packaging:

Iron Grip adhesive is available in:
10.1 fl. oz. (299 mL) fiber caulking cartridges – clear

Fiber cartridges are packaged as 12 units in corrugated boxes. Cartridges are dispensed using a single component hand or air-pressured caulking gun.

- For cleaning, a solvent-dampened clean rag is recommended. Isopropyl Alcohol (IPA) is a commonly used solvent and has proven useful for most non-porous substrates. When handling any solvents, refer to the Manufacturer's Safety Data Sheet (MSDS) for information on handling, safety and personal protective equipment.
- Architectural coatings, paints and plastics should be cleaned with a compatible solvent.
- Since porous materials can absorb and retain moisture, it is important that the substrates are dry prior to application of the adhesive.

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Masking

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

Method of Application

1. Remove dirt, grease and moisture from surface to be bonded. Dry surface or allow surface to dry thoroughly.
2. Cut nozzle tip to desired bead size and pierce inner foil seal.
3. Working in sections, apply adhesive to one surface, 2" from edge, in a zigzag or X pattern.
4. Join parts immediately and wipe away any excess glue during application with mineral spirits. Do not allow excess glue to skin over or cure.

Typical tack free time is 15 minutes. Length of time for full cure depends on thickness of application and other factors such as humidity and temperature. Higher temperatures and humidity will accelerate cure time. Sufficient bond strength typically develops in 4-6 hours to permit handling of parts.

Adhesive Application

- Apply adhesive in a continuous operation applying a positive pressure adequate to properly fill and seal the seam, cavity or joint.
- Tool or strike the adhesive with a concave tool, applying light pressure to spread the material against the joint surfaces to help ensure a void-free application.
- When tooling, use care not to spread the adhesive 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 adhesive should be cleaned from glass, metal and plastic surfaces while still uncured.
- If sealant is applied when the temperature is below 40°F (4°C) or if frost or moisture is present on the surfaces to be sealed, the rate of cure will slow. For standard cure speed, apply in temperatures above 40°F.
- Application of Iron Grip adhesive is not intended for use in temperatures below 32°F (0°C) and above 120°F (48.8°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 overall access to the atmosphere, will cure only from the surface having access to atmospheric moisture.

Typical Properties

Typical property values of Iron Grip adhesive 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	Test Method
Consistency	Paste	
VOC (ex. water & exempt)	< 34 g/l	EPA Method 24
CARB Chem Curing (n.a.) VOC	< 3.0 wt. %	EPA Method 24
Odor	Mild	
Work Life (tooling time)	20 minutes	
Tack Free Time (@ 72°F (22°C), 50% RH)	15 minutes	ASTM C 679
Water-Ready	30 minutes	
Sag/Slump	<0.1	ASTM D 2202

Typical properties are average data and are not to be used as or to develop specifications.

Typical Properties – Cured

Property	Value	Test Method
Hardness, Durometer (Type A Indenter)	24	ASTM D 2240
Tensile Strength	284 psi	ASTM D 412
Elongation	415%	ASTM D 412
Specific Gravity	1.04	WPSTM P-15
Joint Movement Capability	±25%	ASTM C 719
Service Temperature Range (after cure)	-50°F to 300°F	
Not Paintable		

Typical properties are average data and are not to be used as or to develop specifications.

Applicable Standards

Iron Grip adhesive meets or exceeds the requirements of the following specifications:

American Society for Testing & Materials International (ASTM)

- ASTM C920 Standard Specification for Elastomeric Joint Sealants; Type S, Grade NS, Class 25, Use NT, M, G, A & O
- ASTM C557: Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing
Shear Strength Development:
24 hours – 51 psi
14 days – 53 psi
Cyclic Exposure – 60 psi
Tensile strength >16 psi (substrate failure)
- ASTM D3498: Standard Specification for Adhesives for Field-Gluing Plywood to Lumber Framing for Floor Systems
Fiberglass to Fiberglass – 175 psi
Plywood to Marble – 187 psi
Plywood to Stainless Steel – 161 psi
Dry Lumber to Drywall – Drywall failure at 67 psi
- ASTM C881: Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete (Section 11.1 Modified sag test)

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UL Environment

- UL 2818 - GREENGUARD Certification Program For Chemical Emissions For Building Materials, Finishes And Furnishings



American Architectural Manufacturers Association (AAMA)

- AAMA: 802.3 Back Bedding Glazing Compound, Type 1, 805.2 Back Bedding Glazing Compound, Group C, 808.3 Exterior Perimeter Sealing Compound



Proud Member

APA (American Plywood Association)

- APA AFG-01 Test C Dry Lumber – 210 psi

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

CA CARB

- Iron Grip adhesive meets CA CARB VOC requirements

Suggested References:

In addition to the guidelines provided on this datasheet, Momentive Performance Materials recommends that designers and users of Iron Grip adhesive be familiar with the latest editions of the 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 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 Status:

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.

Iron Grip adhesive is not intended for use:

- Below 32°F (0°C) and above 120°F (48.8°C)
- In aquariums and applications where the product will be in continuous contact with water.
- On food contact surfaces
- As a spackling compound
- In applications requiring sealant thickness greater than 1/4".
- On surfaces with special coatings, such as mirrors, without approval of the manufacturer of the article.
- Under exceedingly hot or cold conditions (see Adhesive Application section for additional information).
- On wet, damp, frozen or contaminated surfaces.
- On stovepipes, fireplaces or acrylic tub surrounds.
- 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., compatibility testing is recommended prior to use.
- Silicone materials are hydrophobic in nature and if inadvertently over-applied onto adjacent joint surfaces (even if removed immediately), can create a waterproofing effect. See section on Masking.

Warning

WARNING: UNCURED PRODUCT MAY CAUSE SKIN, EYE & RESPIRATORY TRACT IRRITATION. May cause headache, dizziness, nausea. Methanol & ammonia are released during cure. Avoid breathing vapors. Use in well-ventilated area. Wear skin and eye protection and remove contact lenses before using; thoroughly clean hands after use. Eye contact: Flush eyes with water; get medical attention if irritation persists. Contains hexamethyldisilazane, methyltrimethoxysilane and octamethylcyclotetrasiloxane. Repeated contact may cause skin, respiratory and other health effects. For consumer & professional contractor use. Consult Safety Data Sheet for further information. **KEEP OUT OF REACH OF CHILDREN.**

WARNING: This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Limited Lifetime Guarantee

Manufacturer warrants this product meets Manufacturer's specifications if properly stored 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.

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