

GE Silicone Primers

Information for use with GE silicone sealants

GE silicone primers are formulated for use with the following GE construction silicone rubber adhesive sealants → UltraGlaze*, SilPruf*, RapidStrength*, SilGlaze* II, Sanitary*, Contractors*, Construction*, & SWS products. GE sealants typically offer primeless adhesion to many substrates but a primer may be used to help promote stronger and consistent sealant adhesion to surfaces that may be difficult to bond to.

GE silicone primers described below are supplied ready-to-use (i.e., requiring no mixing) as easily pourable solutions. These primers are intended for application to clean, dry, frost-free, sound surfaces just prior to sealant installation.

NOTE: The use of a primer is not to be mistaken as a substitute for surface preparation and all surfaces which are to receive primer must be cleaned prior to use with an appropriate cleaning procedure. Individual product datasheets contain product specific information and technical data to assist the user in using the product.



For Porous & Non-Porous Substrates

Brick, Concrete, Stone, Paints, Aluminum, Metals, Plastics, etc.

- **SS4044P Primer** – formulated to enhance sealant adhesion to: anodized, powder coated & painted aluminum, bare & conversion-coated aluminum, metals & galvanized metals, copper, brass, painted & stainless steel, brick, concrete, stone, terra cotta, unglazed ceramics, plastics and wood. SS4044P may also be effective on other substrates not listed above.
- **SS4004P Primer** – same as SS4044P except tinted pink for confirmation of coverage on light-colored substrates. SS4044P & SS4004P may be used interchangeably.
- **SS44UV** - Identical formulation to SS4044P except optically brightens under blacklight (UV-A) for confirmation of coverage. May be used interchangeably with SS4044P and SS4004P.
- **SS80 Primer** – formulated to enhance adhesion to a variety of common substrates but also to substrates that are typically difficult to attain adhesion to such as: polyolefin, polypropylene and polyethylene, among others.

For Non-Porous Substrates

Paints, Aluminum, Metals, Plastics, etc.

- **SS4179 Primer** – formulated to enhance sealant adhesion to: various factory applied paints including: fluoropolymers, acrylics, alkyds, powder coats, etc..., most plastics, bare & conversion-coated aluminum, bare metals & galvanized metals, copper, brass, painted & stainless steel. SS4179 is also effective on some porous substrates.

NOTE: In all cases, it is recommended to proceed with a project only after adhesion testing has been performed and the need, or lack thereof, for a primer has been determined.

Priming Procedure

Apply primers by brushing or wiping. For dense smooth substrates (glass, painted aluminum, etc..) a wipe application is suggested. For porous and irregular materials (rough brick, uncut or non-smooth stone, etc.) a brush application is suggested. Spraying or dipping of parts is also possible although these two methods may produce erratic results due to a non-uniform application (which may not produce uniform adhesion). Confine primer application to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces. A thin uniform primer coating of approximately 0.01 to 0.02 mm (0.5mil) thickness usually provides the strongest bond. It is important to know that GE primers are designed to be applied in what a chemist describes as; a 'mono-molecular' layer. Practically speaking, this means; thin is good. Care should be taken so as not to slather or apply the primer onto substrates such that drips or build-ups occur. Excessive or thick applications of primer may produce poor or inconsistent adhesion.

When brushing, it is suggested to use only natural bristle brushes as these are known to provide sufficient results. Brushes with Nylon or synthetic bristles should be avoided unless the bristles are known to be resistant to the solvent in the primer (synthetic bristles could become dissolved by solvent in the primer which can then contaminate the primer solution; possibly affecting adhesion). On irregular porous surfaces, a second coat of primer may be helpful and a site test using a 1-coat vs. 2-coat application will show which offers the best performance.

When wiping, apply a thin film of primer to the surface with a clean lint-free cloth or other appropriate wiping material. The application should be in one continuous uniform motion. Change to a clean rag frequently as contaminants build up or rag becomes dirty. For most primers, a drying time of 5-10 minutes at room temperature is sufficient prior to application of the silicone adhesive sealant. Under colder temperatures drying time may increase somewhat but is rarely longer than 30 minutes. Field tests are suggested at each job or application site to find drying time under current conditions. Allow at least the current drying time in minutes between coats if a second coat is desired. For all of these silicone primers sufficient humidity must be available for proper drying. A minimum of 25% relative humidity is suggested and lower humidity can result in longer drying times. Primers may be left to dry for up to 24 hours before application of the sealant without loss of bonding effects. However, the primed surface should be covered to prevent dirt or contaminant pick-up. Care should be taken with plastic substrates such as polystyrene or polycarbonates, which may tend to become slightly sticky when primer is applied. This can be minimized if the primer is applied with a single, continuous stroke.

Handling and Safety - Safety Data Sheets are available upon request from Momentive Performance Materials. Similar information for solvents and other chemicals used with GE products should be obtained from the respective supplier. When solvents are used, proper safety precautions must be observed.

Estimated PRIMER COVERAGE RATES

Per Lineal Foot of Surface

Coverage rates of SS4044P, SS4004P (tinted), SS44UV, SS4179 & SS80 primer depends on the porosity, roughness and/or absorptive characteristics of the substrate. The coverage rates shown below provide a reasonable estimate of the amount of primer required for both single and double faced joint surfaces to be primed.

300 SQ. FT. per gallon rate → porous brick, limestone, rough concrete

Application width	Lineal Ft./Gal. Coverage		Lineal Ft./Pint Coverage	
	ONE FACE	TWO FACES	ONE FACE	TWO FACES
¼ inch [3 sq.in/ft.]	14,400	7,200	1,800	900
½ inch [6 sq.in/ft.]	7,200	3,600	900	450
¾ inch [9 sq.in/ft.]	4,800	2,400	600	300
1 inch [12 sq.in/ft.]	3,600	1,800	450	225

500 SQ. FT. per gallon rate → concrete, dense brick, dense stone

Application width	Lineal Ft./Gal. Coverage		Lineal Ft./Pint Coverage	
	ONE FACE	TWO FACES	ONE FACE	TWO FACES
¼ inch [3 sq.in/ft.]	24,000	12,000	3,000	1,500
½ inch [6 sq.in/ft.]	12,000	6,000	1,500	750
¾ inch [9 sq.in/ft.]	8,000	4,000	1,000	500
1 inch [12 sq.in/ft.]	6,000	3,000	750	375

700 SQ.FT. per gallon rate → paints, plastics, metals

Application width	Lineal Ft./Gal. Coverage		Lineal Ft./Pint Coverage	
	ONE FACE	TWO FACES	ONE FACE	TWO FACES
¼ inch [3 sq.in/ft.]	33,600	16,800	4,200	2,100
½ inch [6 sq.in/ft.]	16,800	8,400	2,100	1,050
¾ inch [9 sq.in/ft.]	11,200	5,600	1,400	700
1 inch [12 sq.in/ft.]	8,400	4,200	1,050	525

NOTE: Due to surface irregularities, application techniques, and other variables, coverage rates are approximate only and cannot be a guarantee of actual coverage obtained. Trial installations are recommended to obtain coverage rates under actual use conditions.

