Dow Corning® Neutral Plus Silicone Sealant

Description

Dow Corning® Neutral Plus Silicone Sealant is a cost effective, multi-purpose, neutral cure silicone sealant offering long-term durability in a range of general sealing, general glazing, waterproofing and trade applications. It is non-corrosive to concrete, brick and metals.

Typical Properties

Note: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Property	Unit	Value	
Available Colors:		Translucent, aluminum, gold	Black, gray, white, bronze, green
As supplied – tested at 25°C, 50% relative humidity			
Flow, Sag or Slump	mm	< 2	< 2
Tack-free Time*	min	19	13
In-depth Cure for 1 Day*	mm	1.7	1.5
As cured – tested after 7 days at 25°C, 50% relative humidity			
Durometer Hardness (Shore A)		25	38
Ultimate Tensile Strength	MPa	1.2	1.0
Ultimate Elongation	%	400	350
Temperature Stability	°C	-40 to +150	-40 to +150

* Sealant cure rate and working time will vary with temperature and humidity. Higher temperature and humidity equals faster. Lower temperature and humidity equals slower. Where an architectural-grade silicone sealant is required, please consult Dow Corning.

Six Steps to Sure Sealing

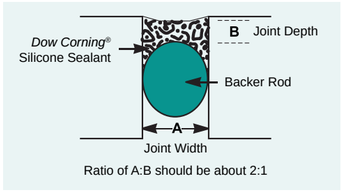
Step 1: Correct Joint Design

Correct joint design minimizes stresses on the sealant, enables optimum sealant movement capability, facilitates sealant application and minimizes the potential for sealant splitting and voiding by enabling cure by-products to exit from the joint.

Guidelines:

1. Minimum joint width of 6 mm
2. Minimum joint depth of 6 mm
3. For larger joints, the width of the joint should be greater than the sealant depth.
4. Avoid three-sided adhesion: apply backer rod or bond breaker tape in the base of the joint to ensure the sealant is only bonded to the sides of the joint and is free to move to its full capacity under joint movement (see Figure 1).

Figure 1: Recommended Joint Design



Ratio of A:B should be about 2:1

Step 2: Clean All Joint Surfaces

Substrate surfaces must be completely clean, dry and sound. Completely remove any loose debris and/or old sealant.

Step 3: Install Backing Material

Backer rod (e.g. closed cell polyethylene type or open cell polyurethane foam type) or similar material (e.g. low tack polyethylene tape for shallow joints) can be used in the base of the joint to control sealant depth and avoid three-sided adhesion by prevention adhesion to the base of the joint.

Step 4: Mask Adjacent Surfaces with Masking Tape

Masking will ensure a clean, neat appearance and reduce clean up by protecting surrounding areas from excess sealant.

Step 5: Applying Sealant

- Cut tip off the cartridge.
- Cut nozzle at 45 degree angle to the desired shape and size.
- Screw nozzle onto cartridge.
- Place cartridge in caulking gun. Air-operated or hand-operated caulking guns can be used.
- Apply sealant into the base of the joint so that it completely fills the joint, wetting both sides. Do not simply lay a bead on the surface as the sealant will not penetrate the joint under its own weight.

Step 6: Tool Joint and Remove Masking Tape

- Tool the surface of the joint immediately after sealant application to provide a smooth, even finish and to ensure the sealant wets the sides of the joint.
- Tooling should be completed in one continuous stroke before the sealant forms a skin (i.e. within the working time). A tool with a convex profile is recommended to keep the sealant within the joint. When sealing horizontal joints, tool the sealant so that any liquids (e.g. rain water, cleaning solutions) do not collect and pool on top of the sealant.
- Do not use soap or water as tooling aids. Remove masking tape immediately after tooling and before the sealant skins.
- After a skin has formed, do not disturb the joint for 48 hours.
- Avoid contact with various cleaning agents or solvents (e.g. bleach) while sealant is curing.
- Uncured sealant can best be cleaned from tools using commercial solvents such as xylene, toluene or methyl ethyl ketone. Mineral turpentine will suffice if available. Observe proper precautions when using flammable solvents. On porous surfaces allow sealant to cure before removing by abrasion. Cured sealant is not soluble and must be trimmed with a blade; avoid undercutting the seal.
- Sealant releases acetic acid (vinegar-like odor) during cure. Once cured this odor disappears. Fully cured sealant is not hazardous.

Usage Rate Table

The table below provides a guide to the linear meters per cartridge for various joint sizes.

Note: actual sealant usage will vary depending on such factors as joint geometry, backer rod placement, tooling and wastage at the job site.

Joint Depth (mm)	Joint Width (mm)						
	6	8	10	12	15	20	25
6	8.3	6.2	5.0	4.1	3.3	2.5	2.0
8	N/O	4.6	3.7	3.2	2.5	1.8	1.5
10	N/O	N/O	3.0	2.5	2.0	1.5	1.2
12	N/O	N/O	N/O	2.0	1.6	1.2	1.0

Limitations

- Do not use for structural glazing
- Not recommended for continuous water immersion applications
- Not recommended for use with marble and similar highly porous stone finishes where sealant may affect their appearance
- Acetoxy Sealant is not recommended for use on materials where the cure by-product (acetic acid vapor) may cause corrosion, discoloration or where the sealant may affect their appearance (e.g. galvanized iron, copper, brass, zinc-coated steel and other metals, concrete, cement, brick, limestone, marble and similar highly porous stone finishes)
- Oxime Sealant may discolor copper and brass
- Not recommended for joints where movement exceeds ±15%
- Not recommended for use in below-ground joints or trafficable joints where abrasion and physical abuse are encountered
- Not recommended for use in the construction or sealing of aquariums
- Cannot be painted as paint will not adhere to sealant
- Acetoxy Sealant is not recommended for use on plastic sheeting. Oxime Sealant is not recommended for use on polycarbonate and acryl plastic sheeting; suitability for use on other types of plastic should be tested prior to application.
- Not for use on freshly painted surfaces (enamel or solvent containing types)
- Should not be applied to materials that bleed plasticizers or solvents or release by-products that may inhibit its cure, affect adhesion or discolor the sealant (e.g. bituminous-based adhesives and coatings)
- Do not clean or treat the sealant with materials, solvents or cleaning agents that may affect or discolor the sealant, particularly during sealant cure
- Do not apply at temperatures below -10°C or when substrate surface temperatures exceed +50°C
- Should not be used as an interior penetration firestop sealing system
- Should not be applied to surfaces in direct contact with food or drinking water; this sealant has not been tested to determine status under U.S. Food and Drug Administration regulations
- Not recommended for direct contact on the reflective coatings on mirrors
- Polyester powder coat paint exhibits a highly variable wax content on the surface; ensure thorough solvent cleaning
- Sealant cures by contact with moisture vapor in the air; not recommended for use in closed or confined areas where sealant cure may be inhibited by lack of air
- Not for medical or pharmaceutical use
- Do not use in the manufacture of Insulated Glass (IG) Units
- All organically extended silicone sealants exhibit higher shrinkage than 100% silicone sealants

High Performance Building Solutions

DOW CORNING

Dow Corning® Sealants for Professional Building Trades

Dow Corning® Glass Sealant

Description

Dow Corning® Glass Sealant is a fast curing high performance, acetic cure silicone sealant for Professional Trade applications. It adheres to glass, ceramic, fiberglass, aluminum and many other non-porous building materials. It may be used to glaze and waterproof for windows, doors, shopfronts, skylights and internal fixtures and fittings.

Typical Properties

Note: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Property	Unit	Value
Available Colors:		Aluminum, black, bronze, clear, gray, white
As supplied – tested at 25°C, 50% relative humidity		
Flow, Sag or Slump	mm	< 2
Tack-free time*	min	11
In-depth cure for 1 day*	mm	1.9
As cured – tested after 7 days at 25°C, 50% relative humidity		
Durometer Hardness (Shore A)		29
Ultimate Tensile Strength	MPa	1.8
Ultimate Elongation	%	400
Temperature Stability	°C	-40 to +150

* Sealant cure rate and working time will vary with temperature and humidity. Higher temperature and humidity equals faster. Lower temperature and humidity equals slower. Where an architectural-grade silicone sealant is required, please consult Dow Corning.

Photo courtesy of Groven+

Dow Corning® Glass and Metal Sealant

Description

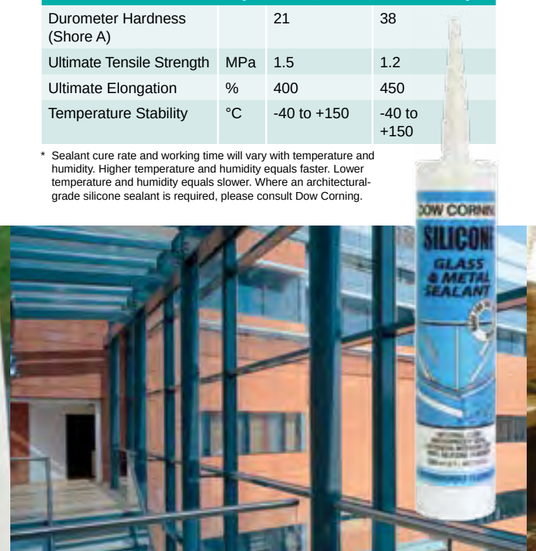
Dow Corning® Glass and Metal Sealant is a high performance, neutral cure silicone sealant designed for a wide range of glazing, weathersealing and Professional Trade applications. It will bond to form a strong weatherproof seal on most common building materials.

Typical Properties

Note: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Property	Unit	Value	
Available Colors:		Translucent, bright black, red, aluminum	Gray, black, white, bronze, green, light gray, dark gray
As supplied – tested at 25°C, 50% relative humidity			
Flow, Sag or Slump	mm	< 2	< 2
Tack-free time*	min	17	12
In-depth cure for 1 day*	mm	2.1	1.8
As cured – tested after 7 days at 25°C, 50% relative humidity			
Durometer Hardness (Shore A)		21	38
Ultimate Tensile Strength	MPa	1.5	1.2
Ultimate Elongation	%	400	450
Temperature Stability	°C	-40 to +150	-40 to +150

* Sealant cure rate and working time will vary with temperature and humidity. Higher temperature and humidity equals faster. Lower temperature and humidity equals slower. Where an architectural-grade silicone sealant is required, please consult Dow Corning.



Dow Corning® Sanitary and Tile Silicone Sealant

Description

Dow Corning® Sanitary and Tile Silicone Sealant is a high performance neutral cure silicone sealant designed to resist the growth of mold and mildew where conditions of high humidity and temperature exist. It is ideal for use in and around bathrooms, laundry sinks, ceramic tiles, vitreous china and enamel painted surfaces.

Typical Properties

Note: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Property	Unit	Value
Available Colors:		Translucent, white, ivory
As supplied – tested at 25°C, 50% relative humidity		
Flow, Sag or Slump	mm	< 2
Tack-free time*	min	17
In-depth cure for 1 day*	mm	2.9
As cured – tested after 7 days at 25°C, 50% relative humidity		
Durometer Hardness (Shore A)		24
Ultimate Tensile Strength	MPa	1.4
Ultimate Elongation	%	450
Temperature Stability	°C	-40 to +150

* Sealant cure rate and working time will vary with temperature and humidity. Higher temperature and humidity equals faster. Lower temperature and humidity equals slower. Where an architectural-grade silicone sealant is required, please consult Dow Corning.

Dow Corning® GP Silicone Sealant

Description

Dow Corning® GP Silicone Sealant is a cost-effective, general purpose, acetic cure formulation offering long-term durability in a range of general sealing and general glazing applications. It may be used to glaze, seal and fill joints on windows, skylights, signs, internal/external fixtures and fittings, doors, etc.

Typical Properties

Note: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Property	Unit	Value
Available Colors:		Aluminum, black, bronze, clear, gray, light gray, white
As supplied – tested at 25°C, 50% relative humidity		
Flow, Sag or Slump	mm	< 2
Tack-free time*	min	11
In-depth cure for 1 day*	mm	1.6
As cured – tested after 7 days at 25°C, 50% relative humidity		
Durometer Hardness (Shore A)		17
Ultimate Tensile Strength	MPa	1.4
Ultimate Elongation	%	550
Temperature Stability	°C	-40 to +150

* Sealant cure rate and working time will vary with temperature and humidity. Higher temperature and humidity equals faster. Lower temperature and humidity equals slower. Where an architectural-grade silicone sealant is required, please consult Dow Corning.

High Performance Building Solutions

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Images: AV04554, AV16586, AV16559, AV16556, AV16551, AV16549, AV16547, AV14607, AV14598, AV14450, AV08339

30021618 Form No. 95-737B-01