Technical Data Sheet

DOWSIL™ GP PLUS High Performance Acetoxy Silicone Sealant

High performance acetoxy cure silicone sealant

Features & Benefits

- One-part, room temperature cure, 100% silicone
- Fast surface curing speed, high tensile strength, good durability
- Stable and flexible from -40°C to 150°C
- Conforms to GB 18583-2008, low VOC (< 4%)
- Conforms to GB/T 14683-2017 and ASTM C920
- Good adhesion to a broad range of building materials, such as glass, aluminum, painted surfaces, ceramic, glass fiber, non-oil wood and some other surface treated substrates

Applications

DOWSIL™ GP PLUS High Performance Acetoxy Silicone Sealant is a one-part room temperature cure acetoxy sealant with excellent adhesion performance on various substrates. Typical applications include:

- Assembling and sealing in glass cabinets and show room
- Assembling and sealing in windows and doors
- Filling and sealing for glass, ceramic and other building materials

Typical Properties

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

Test[1]	Property	Unit	Result
	Color		Translucent, black, white, bronze, aluminum
As supplied – Test as 23°C & 50% RH			
GB/T 13477.6-2002	Flow, sag, slump	mm	<= 3
GB/T 13477.5-2002	Tack free time	minutes	12
ASTM C603	Extrusion rate	ml/min	260
As cured – After 7 days at 23°C & 50% RH			
ASTM D2240	Hardness	Shore A	24
ASTM D412	Tensile strength	MPa	2.18
ASTM D412	Elongation	%	469

1. GB: National standard in China
   ASTM: American Society for Testing and Materials

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How to Use

Surface Preparation

The surface of the substrate should be sufficiently clean, dry, flat and free of foreign matter. Completely remove any existing sealant. For non porous surfaces such as glass and coated aluminum extrusion, remove any grease, oil or dust using a clean cotton cloth and a solvent such as ketone, ethyl carbinol or 75% alcohol. With a dry cloth, remove any residual solvent or dust.

Use of Primer

Adhesion test on substrates prior to general use is always recommended. For specific advice, please contact one of Dow's regional service centers for technical assistance.

Back-up Materials

At the bottom of the joint, use backer rod (e.g. closed-cell type polyethylene or open-cell polyurethane foams) or equivalent material (e.g. low-viscosity polyethylene tape) to control the depth of sealant. Avoid 3-sided adhesion by preventing the sealant from adhering to the bottom of the joint.

Masking and Tooling

Masking tape can be used in the area adjacent to the joint to ensure a neat sealant line, preventing the surrounding surplus sealant from contaminating the substrate surface.

- Tool the joint surface as soon as the sealant is applied, keeping the surface smooth and flat, and ensuring that the edge of the joint is full of sealant.
- Complete the tooling before the sealant skin forms (e.g. in working time). Convex-surface tools are recommended for tooling to allow the joint to remain full of sealant. Tooling must be performed when sealing the horizontal joint to prevent any liquid (e.g. rainwater and cleaner) from staying on the sealant surface.
- Do not use soap or water as tooling assistants.
- After the tooling and before the sealant cures, remove masking tape.
- Do not touch the surface of the sealant within the 48 hours following its cure. Avoid sealant contact with cleaner or solvent (e.g. bleaching agent) during this period.
- When a flammable solvent is used, proper precautions should be applied. For porous material surfaces, allow the sealant to cure completely before removing the masking tape. Cured sealant can be removed with a knife.
- The sealant releases gas during curing; the odor disappears after it is cured. The completely cured sealant is harmless.

Sealant Filling

Cut the nozzle at an angle of 45° depending on the shape and specification needed. Tighten the nozzle onto the sealant tube. Put the sealant tube into the cartridge gun. Use pneumatic or manual cartridge gun. Apply sealant to the bottom of the joint to fill the joint completely and to ensure adhesion to both sides of the joint. Do not apply the sealant simply on the surface as the sealant cannot fully fill the joint by gravity.

Joint Design

Proper joint design can reduce the stress on the sealant and help obtain optimal sealant movement capability, improve the ease of application, reduce cohesive failure, and minimize the effects of curing byproducts.

- Minimum joint width and joint depth: 6 mm.
- For larger joints, the width of the joint shall be larger than the depth of sealant.
- To avoid 3-sided adhesion, backer rod or non-adhesion tape should be used at the bottom of the joint to ensure that the sealant is only adhering to the edge of the joint and to ensure flexible movement in the joint.

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

When stored at or below 30°C in original unopened containers, this product has a usable life of 27 months from the date of production.

Packaging Information

This sealant is supplied in 300 ml cartridges, 24 cartridges per carton. Please contact your local Dow sales office for related information.

Limitations

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

This product is not suitable for following purposes:

- Food contact applications
- Totally confined space
- Structural glazing or insulated glazing
- The joints where physical abuse or abrasion are likely to occur
- Cannot be painted, as paint will not adhere to sealant
- Materials that bleed plasticizers or solvents or release by-products that may inhibit its cure, affect adhesion or discolor the sealant
- Galvanized iron and other metals, copper, brass, concrete, cement, brick, limestone, marble and similar highly porous stone finishes

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.

dow.com

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