Technical Data Sheet

DOWSIL™ Glass Sealant

Glass adhesion acetoxy sealant

Features & Benefits

- 100% silicone sealant
- One-part room temperature cured silicone sealant
- Good adhesion to glass and ceramic materials
- Fast cure, cure-in-depth is more than 2 mm after 24 hrs
- Keep flexibility at -40°C–150°C after cured

Applications

DOWSIL™ Glass Sealant is a high-performance acetoxy sealant, designed for glass adhesion and sealing. Typical applications include:

- Glass cabinet and glass shop-window adhesion and sealing
- Window and door glass, indoor and outdoor glass breaking adhesion and sealing
- Glass and ceramic material adhesion and sealing

Typical Properties

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

Test[1]	Property	Unit	Result	
	Color		Aluminum, bronze	Clear, white, black
	Uncured – 23°C, 50% R.H.			
GB/T13477.6-2002	Flow	mm	< 3	< 3
GB/T13477.5-2002	Tack-free Time	min	11	9.5
GB/T13477.4-2002	Extrusion Rate[2]	g/min	330	268
	Cure-in-depth, 24 hrs, 23°C, 50% R.H.	mm	2.6	2.6
	Cured 7 days – 23°C, 50% R.H.			
ASTM D2240	Hardness	Shore A	29	32
ASTM D412	Tensile Strength	MPa	1.82	2.37
ASTM D412	Elongation at Break	%	394	384

1. GB: National Standard
   ASTM: American Society for Testing and Materials
2. Extrusion rate: Test 3.2 mm caliber under 0.62 MP

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Description

DOWSIL™ Glass Sealant is a high performance acetoxy sealant, characterized by fast cure, good adhesion to glass and ceramic materials, and good physical properties after cured. It is designed for glass glazing, such as window and door, glass door and breaking, and glass cabinet and shop-window.

How to Use

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 are:

- Minimum joint width of 6 mm.
- Minimum joints depth of 6 mm.
- For larger joints the width of the joint should be greater than the sealant depth, recommended the ratio of joint width to depth is 2:1.
- Avoid 3 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 (refer Figure 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 3 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° 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.

How to Use (Cont.)

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 to 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 whilst sealant is curing.
- Uncured sealant can best be cleaned from tools using commercial solvents such as xylene, toluene or methyl ethyl ketone. Cured sealant is not soluble and must be trimmed with a blade, avoid undercutting the seal.

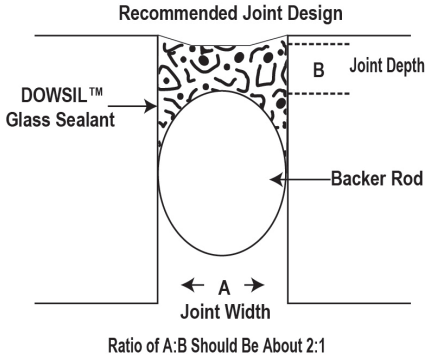

Figure 1.

Usage Rate Table

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

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

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

Handling Precautions

Test it before use. The user is responsible to conduct property test before using to confirm the sealant produces satisfied results. Especially for the surface which is difficult to adhesion and coated substrates, the cohesiveness should be tested.

Be careful the application temperature. When the substrates surface is over than 50°C, it is easy to cause fast-cure or bubbles. When the substrates temperature is lower than 5°C, it is easy to slow-cure. And also, a layer of indiscernible fog is formed on the surface of substrates, which affects the cohesive, so it should be wiped with a piece of dry cloth or heat blow drier.

Handling Precautions (Cont.)

Keep environment well-ventilated and avoid inhaling too much volatile gas generated during cure.

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

Stored properly in a dry and well-ventilated place below 30°C. Usable life is 27 months in original package. For more information refer to package.

Packaging Information

- 300 ml cartridge
- 24 cartridges per carton

Limitations

If you need advanced sealant used for curtain wall construction, please contact your local Dow representative. This product is not suitable for the following purposes:

- Curtain wall glazing
- Continuous water immersion
- Materials that bleed plasticizers or solvents or release by-products that may inhibit its cure, affect adhesion or discolor the sealant
- Unventilated places

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

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.

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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