



Technical Data Sheet

DOWSIL™ 7093 Adhesive Sealant

Low modulus neutral cure silicone adhesive/sealant

Features & Benefits

- One-component adhesive/sealant
- Cures at room temperature when exposed to moisture in the air
- Alkoxy cure system
- Non-sag, paste consistency
- Easy to apply
- Low modulus for high movement capability
- Good adhesion to many substrates
- Stable and flexible from -50°C (-58°F) to +180°C (+356°F)

Applications

- General industrial sealing and bonding applications where non-corrosive cure is, required.

Typical Properties

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

CTM ¹	ASTM ²	Property	Unit	Result
As supplied				
		Appearance		Non-slump paste
		Colors		White, black, gray
0098		Skin-over time	minutes	15
		Viscosity (Low Shear - 1/s)	Pa-sec	881
		Viscosity (High Shear - 10/s)	Pa-sec	143
0364		Extrusion rate ³	g/minute	210
0095		Tack-free time	minutes	28
0062		Flow (MIL-S-8802 Jig) ⁴	cm	0.08

1. CTM: Corporate Test Method, copies of CTMs are available on request.

2. ASTM: American Society for Testing and Materials.

3. Extrusion rate: 3.2mm orifice at 0.62 MPa.

4. MIL: Military Specification and Standards.

Typical Properties (Cont.)

CTM	ASTM	Property	Unit	Result
Mechanical properties, cured 7 days in air at 25°C (77°F) and 50% relative humidity				
0022	D 792	Specific gravity		1.5
0099	D2240	Durometer hardness, shore A		30
0137A	D412	Tensile strength	MPa	1.7
0137A	D412	Modulus 100%	MPa	0.43
0137A	D412	Elongation at break	%	700

How to Use

Substrate Preparation

All surfaces must be clean and dry. Degrease and wash off any contaminants that could impair adhesion. Suitable solvents include isopropyl alcohol, acetone or methylethyl ketone.

Unprimed adhesion may be obtained on many substrates such as glass, metals and most common engineering plastics. Substrates to which good adhesion is normally not obtained include PTFE, polyethylene, polypropylene and related materials.

For maximum adhesion, the use of DOWSIL™ 1200 OS Primer is recommended. After solvent cleaning apply a thin coat of DOWSIL™ 1200 OS Primer by dipping, brushing or spraying. Allow primer to dry for 15 to 90 minutes at room temperature and a relative humidity of 50% or higher.

How to Apply

Apply DOWSIL™ 7093 Adhesive Sealant to one of the prepared surfaces, then quickly cover with the other substrate to be bonded.

On exposure to moisture, the freshly applied material will "skin-over" in about 10–20 minutes at room temperature and 50% relative humidity. Any tooling should be completed before this skin forms. The surface is easily tooled with a spatula. The adhesive/sealant will be tack-free in about 30 minutes.

Cure Time

After skin formation, cure continues inward from the surface. In 24 hours (at room temperature and 50% relative humidity) DOWSIL™ 7093 Adhesive Sealant will cure to a depth of about 2mm. Very deep sections, especially when access to atmospheric moisture is restricted, will take longer to cure completely. Cure time is extended at lower humidity levels.

Before handling and packaging bonded components, users are advised to wait a sufficiently long time to ensure that the integrity of the adhesive seal is not affected. This will depend on many factors and should be determined by the user for each specific application.

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 (86°F) in the original unopened containers, DOWSIL™ 7093 Adhesive Sealant has a usable life of 12 months from the date of production.

As DOWSIL™ 7093 Adhesive Sealant cures by reaction with moisture in air, keep the container tightly sealed when not in use. A plug of used material may form in the tip of a tube or cartridge during storage. This is easily removed and does not affect the remaining contents.

Limitations

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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