

Dow Corning® 3-0100 Automotive Sealant

FEATURES

- 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
- Cures to a tough, flexible rubber
- Low volatility
- Excellent adhesion to many substrates
- Stable and flexible from -55°C to +180°C

Low volatility neutral cure silicone adhesive/sealant

APPLICATIONS

- Designed for use in automotive component assembly where adhesion to a wide variety of substrates is important.
- Used as a Formed-in-Place Gasket (FIPG) material.

TYPICAL PROPERTIES

Specification Writers: 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.

CTM*	ASTM**	Property	Unit	Result
		As supplied		
0176		Appearance		Non-slump paste
		Color		Black
0364	D2452	Extrusion rate ¹	g/minute	145
0098		Skin-over time	minutes	24
0095	MIL-S-8802E	Tack-free time ²	minutes	50
		Mechanical properties, cured 7 days at 23°C and 50% relative humidity		
0022	D792	Specific gravity		1.32
0099	D2240	Durometer hardness, Shore A		37
0137A	D412	Tensile strength	MPa	2.2
0137A	D412	Elongation at break	%	455
0243	D816	Lap shear adhesion, aluminium	MPa	1.85
		Heat ageing, 7 days at 200°C		
0099	D2240	Change in durometer hardness	points	-3
0137A	D412	Change in tensile strength	%	-17
0137A	D412	Change in elongation at break	%	-17
		Fluid immersion resistance, 7 days at 150°C in GW 5W-30 SG		
0099	D2240	Durometer hardness, Shore A		18
0137A	D412	Tensile strength	MPa	1.7
0137A	D412	Elongation at break	%	415
0231A	D471	Volume swell	%	+35
		Fluid immersion resistance, 7 days at 122°C in 50/50 GlycolWater		
0099	D2240	Durometer hardness, Shore A		39
0137A	D412	Tensile strength	MPa	2.8
0137A	D412	Elongation at break	%	356
0231A	D471	Volume swell	%	+2

¹Extrusion rate measured using 3.18mm diameter nozzle at 0.62MPa.

²Tack-free time is the time required for the product to develop a non-tacky surface based on adhesion to a polyethylene film.

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

**ASTM: American Society for Testing and Materials.

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 methyl ethyl ketone.

Good unprimed adhesion may be obtained on many substrates such as glass, metals and most common engineering plastics. Adhesion may be less successful on low energy plastics such as polyethylene, polypropylene or PTFE.

For maximum adhesion, the use of *Dow Corning*[®] 1200 OS Primer is recommended. After solvent cleaning, a thin coat of *Dow Corning* 1200 OS Primer is applied 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 a bead of *Dow Corning* 3-0100 Automotive 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 25 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. *Dow Corning* 3-0100 Automotive Sealant will be tack-free in about 50 minutes.

Cure time

After skin formation, cure continues inward from the surface. In 24 hours (at room temperature and 50% relative humidity) *Dow Corning* 3-0100 Automotive 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. 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 FROM YOUR LOCAL DOW CORNING SALES REPRESENTATIVE.

STORAGE

Product should be stored at or below 30°C in original, unopened containers. The most up-to-date shelf life information can be found on the XIAMETER Web site in the Product Detail page under Sales Specification.

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 Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our Web site, dowcorning.com or consult your local Dow Corning representative.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

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Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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