

DOW CORNING® 744 Adhesive/Sealant

FEATURES

- One-part
- Room temperature cure
- Neutral alkoxy cure system
- Non-sag
- Excellent adhesion to many substrates
- Stable and flexible from -50°C to +180°C
- Flexible rubber - protects against mechanical shock and thermal cycling stress at components
- Excellent dielectric properties

High performance silicone adhesive/sealant

APPLICATIONS

- Designed to provide long term bonding and to protect against moisture, environmental attack, mechanical and thermal shock as well as vibration where a room temperature curing product is preferred.
- Typical applications include: bonding of large components such as batteries or capacitors to circuit boards.

TYPICAL PROPERTIES

Specifications writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales representative prior to writing specifications on this product.

CTM*	ASTM*	Property	Unit	Value
As supplied				
0176		Colour		White
		Consistency		Non-slump paste
0364	D2452	Extrusion rate ¹	g/minute	190
0095		Tack-free time ²	minutes	30
Physical properties, cured 7 days at 23°C and 50% relative humidity				
0022	D0792	Specific gravity at 23°C		1.4
0099	D2240	Durometer hardness, Shore A		39
0137A	D412	Tensile strength	MPa	2.6
0137A	D412	Elongation at break	%	620
0137A	D412	Tear strength - die B	kN/m	14
Electrical properties, cured 7 days at 23°C and 50% relative humidity				
0114	D149	Dielectric strength	kV/mm	16
0249	D257	Volume resistivity	Ohm.cm	1.0x10 ¹⁵

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

2. Tack-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.

Certain plastics such as polypropylene and polytetrafluoroethylene may require specific surface treatment, such as chemical etching or plasma treatment to obtain optimum adhesion.

How to apply

Apply a bead of DOW CORNING 744 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 10-15 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) DOW CORNING 744 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. 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.

USABLE LIFE AND STORAGE

When stored at or below 30°C in the original unopened containers, this product has a usable life of 12 months from the date of production.

As DOW CORNING 744 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.

In pails a skin may form on the surface. This should be removed before placing in dispensing equipment.

PACKAGING

This product is available in standard industrial container sizes. For details please refer to your Dow Corning sales office.

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 Health, Environment and Regulatory Affairs specialists available in each area.

For further information, please consult your local Dow Corning representative.

LIMITED WARRANTY - PLEASE READ CAREFULLY

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