Product Information

DOW CORNING

DOW CORNING® Q1-9225 Silicone Adhesive

FEATURES

- Two-part, 10:1 mixing ratio
- Non-sag
- Long pot life
- Rapid heat cure
- Addition cure system: no cure by-products
- Self-priming
- Flexible rubber - protects against mechanical shock and thermal cycling stress at components
- Stable and flexible from -50°C (-58°F) to +200°C (392°F)
- Excellent dielectric properties

Thixotropic adhesive

APPLICATIONS

- Designed to provide long term bonding and to protect against moisture, environmental attack, mechanical and thermal shock as well as vibration especially where a non-slumping product is needed.
- Typical applications include: bonding of materials with dissimilar thermal expansion characteristics like silicone to ceramic or metal, or plastic to metal.

TYPICAL PROPERTIES

Specification 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		Color (Base/Curing Agent)		White/Clear
0050	D1084	Viscosity at 23°C (73.4°F) (Base/Curing Agent)	mPa.s	Non-sag/300
		Mixing ratio by weight		10:1
		Catalyzed, mixed 10:1 by weight		
0176		Color		White
		Consistency at 23°C (73.4°F)		Non-sag
		Working time at 23°C (73.4°F)	hours	24
		Physical properties, cured 30 minutes at 150°C (302°F)		
0176		Color		White
0022	D792	Specific gravity		1.13
0099	D2240	Durometer hardness, Shore A		47
0137A	D412	Tensile strength	MPa	6.6
0137A	D412	Elongation at break	%	415
0159A	D624	Tear strength - die B	kN/m	13
		Electrical properties, cured 1 hour at 150°C (302°F)		
0114	D149	Dielectric strength	kV/mm	18
0249	D257	Volume resistivity	Ohm.cm	2x10¹⁴
		Adhesion properties cured 1 hour at 150°C (302°F)		
0243		Lap shear strength on unprimed aluminium	MPa	3.4

* 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 should be cleaned and degreased with a suitable solvent. Care should be taken to ensure that all solvent is removed.

DOW CORNING Q1-9225 Silicone Adhesive has been specially formulated to provide excellent unprimed adhesion to many metals,

ceramics, glass, laminates, resins and plastics. Good adhesion cannot be expected on low surface energy substrates such as polytetrafluoroethylene, polyethylene and polypropylene. Special surface treatments such as chemical etching, corona discharge or plasma treatment are required to give a reactive surface and promote adhesion onto these types of substrates. In general, it has been shown that for difficult substrates, adhesion is improved using the maximum cure temperature.

Substrates which melt at or below the cure temperature of DOW CORNING Q1-9225 Silicone Adhesive should not be used.

Mixing

DOW CORNING Q1-9225 Silicone Adhesive is supplied in lot matched kits consisting of a base material and a curing agent in separate containers.

The two components should be thoroughly mixed using a weight or volume ratio of 10:1. After mixing DOW CORNING Q1-9225 Silicone Adhesive has a working time of 24 hours at room temperature.

Vacuum de-airing is recommended. A residual pressure of 10-20mm mercury applied for 15 minutes will sufficiently de-air the material.

How to apply

Apply DOW CORNING Q1-9225 Silicone Adhesive and bond the surfaces together.

For information on appropriate dispensing equipment for your application, please contact Dow Corning.

Curing

For complete cure and more importantly for optimum adhesion, DOW CORNING Q1-9225 Silicone Adhesive should be cured using one of the following recommended schedules:

30 minutes at 150°C (302°F), or
1 hour at 100°C (212°F)

Large components and assemblies may require longer times in order to reach the curing temperature.

Compatibility

In some cases, DOW CORNING Q1-9225 Silicone Adhesive may fail to cure to optimum properties when in contact with certain plastics or rubbers.

Cleaning the substrate with solvent or baking slightly above the cure temperature can eliminate the problem.

Certain chemicals, curing agents and plasticisers can inhibit cure. These include:

- Organo-tin compounds
- Silicone rubber containing organo-tin catalysts
- Sulphur, polysulphides, polysulphones and other sulphur containing materials
- Amines, urethanes, amides and azides.

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 35°C (95°F) in the original unopened containers, this product has a usable life of 12 months from the date of production.

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.

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 Dow Corning's products are safe, effective, and fully satisfactory for the intended end use. Dow Corning's sole warranty is that the product will meet the Dow Corning sales specifications in effect at the time of shipment. 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. Dow Corning specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability. Unless Dow Corning provides you with a specific, duly signed endorsement of fitness for use, Dow Corning disclaims liability for any incidental or consequential damages. Suggestions of use shall not be taken as inducements to infringe any patent.

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