

DOW CORNING® 93-006

Aerospace Sealant

FEATURES

- Thixotropic
- Two part sealant
- Choice of pot life
- Prevents bi-metallic corrosion
- Two catalysts are available: choice of 1 and 6 hour working time

Two part, room temperature curing silicone elastomer

APPLICATIONS

- Applications such as fay surface sealing and environmental sealing as a formed-in-place gasket.
- Prevents bi-metallic corrosion even at high temperatures.

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
Physical and chemical properties				
		Physical nature, as cured		Elastomer
		Color		Grey
		Mixing ratio base/catalyst		10:1
0050	D1084	Viscosity	mPa.s	800,000
		Non-volatile content	%	99
		Relative density		1.40
		Working time: 1 catalyst	hours	1
		Working time: 6 catalyst	hours	6
		Cure time: 1 catalyst ¹	hours	10
		Cure time: 6 catalyst ¹	hours	48
		Full cure time (to develop optimum physical properties)	days	7
Mechanical properties - 24 hours at room temperature				
0099	D2240	Durometer hardness, Shore A		42
0137A	D412	Tensile strength	MPa	3.0
0137A	D412	Elongation at break	%	180
0243		Lap shear strength ²	MPa	2.4
		Tear strength	kN/m	4
Mechanical properties - 24 hours room temperature and 7 days 232°C (449.6°F)				
0099	D2240	Durometer hardness, Shore A		30
0137A	D412	Tensile strength	MPa	2.1
0137A	D412	Elongation at break	%	160
0243		Lap shear strength ²	MPa	1.4

1. Cure time is defined as time required for the Durometer hardness to reach 30 points (Shore A).

2. On Aluminium, primed with DOW CORNING® 1200 primer and air dried for 60 minutes.

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

ASTM: American Society for Testing and Materials.

HOW TO USE

Substrate preparation

DOW CORNING 93-006 Aerospace Sealant adheres well to primed surfaces of most materials used in the aerospace and aircraft industries. Typical materials include glass, cured silicone rubber, cork, phenolic, polyester, epoxy, silicone resin laminates and most metals including stainless steel, titanium and aluminium. It may not adhere well to polyethylene or certain plastics and organic materials (including rubber), which bleed or exude plasticisers.

Stronger and more uniform bonds are obtained by preparing metal and plastic surfaces with DOW CORNING® 1200 Primer. For best results:

1. Clean the surface with a chlorinated solvent (see Handling Precautions) and a slightly abrasive pad or a coarse lint-free cloth.
2. Rinse cleaned surface with acetone or methyl ethyl ketone.
3. Apply a thin coat of primer by dipping, brushing or spraying.
4. Allow the primer to dry for at least 1 hour, according to relative humidity.
5. Silicone rubber surfaces should not normally be primed, but only roughened slightly with abrasive paper and rinsed with acetone.

Mixing

The catalyst is added in a ratio of 10 parts of base to 1 part catalyst by weight. For best results the base should be thoroughly de-aired in standard vacuum equipment for 2 hours at greater than 650mm of mercury vacuum. The catalyst may then be added to the base in an air-free mixer, such as a Semco® Pressure Mixer, model S-1350 or S-1378. Hand mixing may also be used if, after mixing, the product is de-aired in vacuum for about 30 minutes.

How to apply

The catalysed material can be cast, troweled or air injected with standard equipment.

Working and curing time

When using 1 catalyst, DOW CORNING 93-006 Aerospace Sealant will have a working time of 1 hour with a cure time of 10 hours. However if 6 catalyst is used, the working time will be 6 hours and the cure time 48 hours. With either catalyst, DOW CORNING 93-006 Aerospace Sealant will achieve optimum physical properties in 7 days.

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 32°C (89.6°F) in the original unopened containers, DOW CORNING 93-006 Aerospace Sealant has a usable life of 12 months from the date of production.

PACKAGING

DOW CORNING 93-006-1 is available in 908g and 22.7kg kits.

DOW CORNING 93-006-6 is available in 170g, 454g and 4.54kg kits.

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.