Product Information

DOW CORNING

DOW CORNING® 3-6512 Elastomer

FEATURES

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

Soft silicone elastomer

APPLICATIONS

- Designed to protect against moisture, environmental attack, mechanical and thermal shock as well as vibration.
- Typical applications include: encapsulation of amplifiers, automotive electronic units, high frequency modules and power supplies.

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		Colour (Part A/Part B)		Clear/Red
0050	D1084	Mixed viscosity at 23°C[1]	mPa.s	800
0022	D792	Specific gravity at 23°C (Part A/Part B)		0.97/0.97
		Mixing ratio by weight		1:1
0055	D1824	Pot life at 23°C[2]	hours	24
		Physical properties, cured 2 hours at 70°C		
		Color		Transparent pale straw
0099	D2240	Durometer hardness, Shore 00		48
		Volume coefficient of thermal expansion	1/K	9.6x10[a¤]
		Coefficient of thermal conductivity	W/(m.K)	0.15
		Electrical properties, cured 2 hours at 70°C		
0114	D149	Dielectric strength	kV/mm	20
0249	D257	Volume restivity	Ohm.cm	4.0x10[1¤]

1. Brookfield LVF, spindle #2 at 12rpm
2. Time required for catalysed viscosity to double at 23°C.

* 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 prior to potting. Care should be taken to ensure that all solvent is removed.

For best adhesion, coat surfaces with DOW CORNING® 92-023 Primer or DOW CORNING® 1200 OS Primer , following the instructions and precautions given for use of these products.

Mixing

DOW CORNING 3-6512 Elastomer is supplied in lot matched kits consisting of Part A and Part B in separate containers.

The two components should be thoroughly mixed using a weight or volume ratio of 1:1 until the mixture has a uniform colour. The pot life is

24 hours at room temperature.

Vacuum de-airing is recommended. A residual pressure of 10-20mm mercury applied for 5 minutes will sufficiently de-air the material.

How to apply

Being careful to avoid air entrapment, apply the encapsulant. Vacuum encapsulation is recommended for complex geometries.

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

Curing

DOW CORNING 3-6512 Elastomer should be cured using one of the recommended schedules below:

2 hours at 70°C, or
1 hour at 100°C, or
30 minutes at 150°C.

DOW CORNING 3-6512 Elastomer will also cure at room temperature (23°C) within 7 days. Large components and assemblies may require longer times in order to reach the curing temperature.

Compatibility

In some cases, DOW CORNING 3-6512 Elastomer 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 will normally 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 32°C in the original unopened containers, this product has a usable life of 24 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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