

DOW CORNING® Q3-3526 Base and Catalyst Adhesive/Sealant

FEATURES

- Fast handling of bonded components:
develops adhesive strength rapidly at room temperature permitting fast handling of components
- Adheres to many metals, polyamide, PC, PBT, PET, ABS and acrylics, and to plastics treated with scratch resistance coatings
- Adheres to suitably prepared polypropylene
- 2-part system with 10:1 mix ratio by weight. Non-corrosive, low odour cure
- Contains no solvents
- Non-slump nature when mixed, allows extruded bead to be maintained without flowing
- Excellent weathering, U.V. and heat resistance to 190°C
- Available in two colour versions:
Grey (RAL 7038)
Black (RAL 7016)

Fast curing non-slump two-part silicone adhesive/sealant

APPLICATIONS

- Designed for the rapid sealing/adhering of components made from materials which exhibit different thermal expansion rates, or which are exposed to high temperatures.
- Assembly of automotive headlights and auxiliary lights, body panels and body components, assembly of oven door windows and other appliance components.

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	
DOW CORNING Q3-3526 Base					
		Appearance and colour		Yellow paste	
0050	D1084B	Viscosity	mPa.s	200,000	
0097	D1475	Specific gravity		1.36	
DOW CORNING Q3-3526 Catalyst					
		Appearance and colour		Grey	Black
				Black pourable paste	Black paste
0050	D1084B	Viscosity	mPa.s	11,000	55,000
0097	D1475	Specific gravity		1.01	1.03
Dow Corning Q3-3526 Base and Catalyst (mixed 10:1 by weight)					
0092A		Working time	minutes	8	8
0095		Tack-free time	minutes	20	20
0062	D2202	Flowability	mm	Non-flowing	
		Colour	RAL number	7038	7016
Cured for 7 days at 23°C					
0099	D2240	Durometer hardness	Shore A	38	40
0137A	D412	Tensile strength at break	MPa	2.0	2.1
0137A	D412	Elongation at break	%	280	270
0243	D816	Adhesion, via lap shear to PC, PA, PP, PBT glass/plastic samples, 2mm bond line ¹			
		- Lap shear strength	MPa	1.40	1.40
		- Cohesive failure	%	100	100

1. All substrates unprimed/untreated except PP (treated via Corona).
* CTM: Corporate Test Method, copies of CTMs are available on request.
ASTM: American Society for Testing and Materials.

DESCRIPTION

DOW CORNING Q3-3526 Base and Catalyst Adhesive/Sealant is a two component silicone product designed to be used in a ratio of 10:1 by weight. The mixed, uncured product is non-slump for good reproducibility of bead profiles. It cures rapidly at room temperature via a non-corrosive, low odour condensation cure mechanism to yield excellent unprimed adhesion to glass, and many plastic and metal substrates. The product develops adhesive strength rapidly at room temperature permitting fast handling for leakage testing or for storage of bonded components.

HOW TO USE

Substrate preparation

The surfaces to be bonded should be free of grease, dust and particles. Primers are not required to obtain adhesion to many engineering plastics such as polyamides, PC, ABS, PBT, acrylics, glass and metals. Adhesion to polypropylene is routinely achieved via surface activation techniques such as flaming or corona treatment. Consult Dow Corning for further information.

Mixing

100 parts of base should be mixed with 10 parts by weight of grey or black catalyst (see Handling Precautions). On a volume base, the mix ratios of base to catalyst are 7.4:1 for the grey catalyst and 7.6:1 for the black catalyst.

For production processing, 2-component meter/mix equipment is recommended. The base component is fed via follower-plate mounted pumps, while the catalyst component may also be fed via pressure vessels under dry air or nitrogen. The base and catalyst streams are fed to metering pumps (gears or piston driven), and then mixed using either static or dynamic mixers. The pronounced difference in colour between the base and the catalyst components allows for easy visual inspection of the mixing quality. Further information on suitable equipment is available from Dow Corning.

How to apply

Use a multi-axis robot or an XYZ co-ordinate table. The mixed product is applied onto one surface and the mating surface is assembled immediately to ensure optimum substrate wetting and adhesion. The non-slump nature of the uncured product ensures good reproducibility of applied beads.

Curing of the product and handling of bonded components

A feature of DOW CORNING Q3-3526 Base and Catalyst Adhesive/Sealant is the fast rate at which adhesive strength develops immediately after adhesive application. This feature allows for fast handling of bonded components and is dependent on the substrate used as shown in Graphs 1 & 2.

The graphs show the rate of adhesive strength development onto key plastic substrates and to galvanised steel using glass-to-substrate lap shear specimens (2mm adhesive layer), after cure at room temperature, as well as after a moderate heat schedule of 15 minutes at 70°C. Note that polypropylene substrates were suitably treated but other substrates were untreated except for a prior cleaning with isopropyl alcohol. The graphs show that room temperature cure is sufficient to obtain fast adhesion development onto most substrates; however, the use of moderate heat accelerates the cure and adhesion development onto many substrates and allows the time to handling to be reduced if desired. Temperatures above 75°C are not recommended to accelerate the cure and adhesion.

The data provided is indicative of the performance of DOW CORNING Q3-3526 Base and Catalyst Adhesive/Sealant. However, as specific conditions are likely to vary in actual use, it is recommended users determine more exactly optimal cure conditions for individual applications.

HANDLING PRECAUTIONS

DOW CORNING Q3-3526 Base is essentially non-hazardous and non-flammable. DOW CORNING Q3-3526 Catalyst Grey and Catalyst Black are flammable (flash point of 24°C), and are skin and eye irritants; the appropriate precautions must be taken.

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 DOW CORNING Q3-3526 Base has a usable life of 16 months from the date of manufacture.

DOW CORNING Q3-3526 Catalyst Grey and Catalyst Black have a usable life of 5 months from date of manufacture when stored at 25°C or below in the original unopened containers.

DOW CORNING Q3-3526 Catalyst Grey and DOW CORNING Q3-3526 Catalyst Black are sensitive to moisture and contamination. Ensure that containers are tightly closed after use.

PACKAGING

DOW CORNING Q3-3526 Base is available in 25kg and 250kg containers.

DOW CORNING Q3-3526 Catalyst Grey and Catalyst Black are available in 20kg and 25kg containers.

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.

