

DOW CORNING® 7091 Adhesive/Sealant

FEATURES

- One-component adhesive/sealant
- Cures at room temperature when exposed to moisture in the air
- Alkoxy cure system
- Non-sag, paste consistency
- Easy to apply
- Cures to a tough, flexible rubber
- Excellent adhesion to many substrates
- Stable and flexible from -55°C to +180°C

High performance neutral cure silicone adhesive/sealant

APPLICATIONS

- Designed for applications which demand a strong but flexible bond, such as when bonding materials with differing thermal expansion rates, e.g. glass to metal or glass to plastic.
- Unprimed adhesion to commonly used materials including enamelled and painted steel, aluminium, ceramic and glass as well as to certain plastics used in engineering applications.
- Used as a Formed-in-Place Gasket (FIPG) material.

TYPICAL PROPERTIES

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

CTM*	ASTM*	Property	Unit	Value
As supplied				
		Appearance		Smooth, non-slump paste
		Colours		Black, white, grey
0364	D2452	Extrusion rate ¹	g/minute	135
0095	MIL-S-8802E	Tack-free time ²	minutes	28
Mechanical properties, cured 7 days at 22°C and 50% relative humidity				
0099	D2240	Durometer hardness, Shore A		37
0137A	D412	Tensile strength	MPa	2.5
0137A	D412	Elongation at break	%	680
0137A	D412	Tear strength - die B	kN/m	15
0022	D0792	Specific gravity at 22°C		1.4
Adhesion cured 7 days at 22°C and 50% relative humidity				
100% Cohesive failure is obtained on metals and glass but also on ABS, polycarbonate, talc-filled polypropylene-corona treated, anti-scratch coated plastic				

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

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.

Good unprimed adhesion may be obtained on a variety of substrates, including enamelled and painted steel, aluminium, ceramic, glass and certain plastics. Substrates to which good adhesion is normally not obtained include PTFE, polyethylene, polypropylene and related materials.

For maximum adhesion, the use of DOW CORNING® 1200 OS Primer is recommended. After solvent cleaning apply a thin coat of DOW CORNING 1200 OS Primer by dipping, brushing or spraying. Allow primer to dry for 15 to 90 minutes at room temperature and a relative humidity of 50% or higher.

How to apply

Apply a bead of DOW CORNING 7091 Adhesive/Sealant (see Handling Precautions) 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 approximately 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 7091 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

When using solvents avoid contact with skin and eyes, heat, sparks and open flames. Always provide adequate ventilation. Obtain and follow handling precautions from the solvent supplier.

A Product Safety Data Sheet should be obtained from your nearest Dow Corning sales office prior to use.

ATTENTION: Before handling, read product information, Product Safety Data Sheets and container labels for safe use, and any physical and/or health hazard information.

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.

Dow Corning will guarantee the usable life of this product until the date indicated on the packaging. This date is shown by the letters "EXP" (meaning Expiry) followed by 4 digits, which stand for the month (last day) and year. Example: "EXP 03/99" means use by 31 March 1999.

PACKAGING INFORMATION

This product is available in 310ml cartridges, 20 litre pails and 250kg drums.

LIMITATIONS

Adhesion may be less successful on low-energy plastics such as Polyethylene, Polypropylene and PTFE. Users should do preliminary tests in each specific application to ensure satisfactory results.

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

Dow Corning's Health, Environment and Regulatory Affairs (HERA) Department is available to support customers for their product safety needs. For further information, you can contact this group at:

Dow Corning Europe
Belgium
TEL: Int +32 (0)2 655 2523
TEL: Int +32 (0)2 655 2304
FAX: Int +32 (0)2 655 2013

WARRANTY INFORMATION - PLEASE READ CAREFULLY

The information contained herein is offered in good faith based on Dow Corning's research and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information shall not be used in substitution for customer's tests to ensure that Dow Corning's products are fully satisfactory for your specific applications. Dow Corning's sole warranty is that the product will meet its current sales specifications. 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.

Your Global Connection

At home or abroad - wherever your business takes you - you'll find the product supply, customer service and technical support you need to succeed available locally from Dow Corning. Whether you face a challenge that could benefit from Dow Corning's international experience, or you need a reliable, local source of supply for innovative solutions, just pick up the phone and call us.

To consult Dow Corning web site, type: www.dowcorning.com

DOW CORNING ASIA

Australia & New Zealand

Dow Corning Australia Pty Ltd.

Tel.: +61 1300 360 732

Fax: +61 2984 741 00

China

Dow Corning China Ltd.

Tel.: +86 21 6249 2316

Fax: +86 21 6249 2317

China

Dow Corning Asia (H.K.)

Tel.: +852 2835 0350

Fax: +852 2836 6650

India, Indonesia, Singapore, Malaysia & Philippines

Dow Corning Singapore Pte Ltd.

Tel.: +65 253 6611

Fax: +65 253 6070

Japan

Dow Corning Asia Ltd.

Tel.: +81 3 3287 1151

Fax: +81 3 3287 1059 & 1081

Japan

Dow Corning Toray Silicone Co Ltd.

Tel.: +81 3 3287 1010

Fax: +81 3 3287 1201

Korea

Dow Corning Korea Ltd.

Tel.: +82 2 551 7600

Fax: +82 2 551 6800

Taiwan

Dow Corning Taiwan Inc.

Tel.: +886 2 2713 6936

Fax: +886 2 2717 2209

Thailand

Dow Corning Thailand Ltd.

Tel.: +66 2 326 0773

Fax: +66 2 326 0767

DOW CORNING EUROPE

Germany, Austria, Switzerland & Eastern Europe

Dow Corning GmbH

GERMANY

Tel.: +49 (0)611 - 23 71

Fax: +49 (0)611 - 237 610

France & North Africa

Dow Corning France S.A.

Tel.: +33 (0)4 72 84 13 60

Fax: +33 (0)4 72 84 13 79

Italy & Eastern Mediterranean Countries

Dow Corning S.p.A.

ITALY

Tel.: +39 039 - 60 711

Fax: +39 039 - 68 996 60

Poland

Dow Corning Polska Sp. zo.o.

Tel.: +48 (0)22 645 14 46

Fax: +48 (0)22 645 14 40

United Kingdom, Eire, Nordic Countries, Benelux, South Africa & Middle East

Dow Corning

UNITED KINGDOM

Tel.: +44 (0)1 676 52 80 00

Fax: +44 (0)1 676 52 80 01

Spain & Portugal

Dow Corning Ibérica S.A.

SPAIN

Tel.: +34 93 36 36 900

Fax: +34 93 36 36 901

DOW CORNING NORTH AMERICA

Dow Corning Corporation

Tel.: +1 517 496 6000

Fax: +1 517 496 8026

DOW CORNING SOUTH AMERICA

Dow Corning do Brasil Ltda.

Tel.: +55 11 3759 4300

Fax: +55 11 3758 5727