

## *Dow Corning*<sup>®</sup> 791 Silicone Weatherproofing Sealant

### FEATURES

- Ideal for expansion, connection, perimeter and other movement joints
- Neutral cure
- Low odor
- Conforms to ISO 11600-F&G-25LM
- Resistant to ozone, ultra-violet radiation and temperature extremes
- Joint movement capability  $\pm 50\%$

Neutral silicone sealant

### APPLICATIONS

- *Dow Corning*<sup>®</sup> 791 Silicone Weatherproofing Sealant is a one-part, neutral curing, low modulus silicone sealant particularly suitable for general glazing and weather sealing in curtain wall and building facades.

### TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Test*	Property	Unit	Value
	Cure system		Alkoxy
	Application temperature	°C	-25 to + 50
		°F	-13 to + 122
CTM 97B	Specific gravity		1.50
CTM 364C	Extrusion rate	g/minute	220
CTM98B	Skin-over time	minutes	20
	(23°C or 73°F, 50% R.H.)		
CTM 95A	Tack-free time (23°C or 73°F, 50% R.H.)	minutes	30
CTM 663A	Cure rate (23°C or 73°F, 50% R.H.)		
	1 day	mm	2.0
	3 days	mm	4.0
	<b>2mm thickness S2 dumb-bells (ISO ** 37/DIN*** 53 504)</b>		
CTM 137A	Modulus 100%	MPa	0.45
CTM 137A	Tensile strength	MPa	1.9
CTM 137A	Elongation at break	%	700
	<b>12x12x50mm size T.A. joint (ISO 8339/DIN 2-8339)</b>		
CTM 677	Modulus 100%	MPa	0.35
CTM 677	Tensile strength	MPa	0.75
CTM 677	Elongation at break	%	380
CTM 99E	Hardness (Shore A)		29
ISO 7389	Elastic recovery	%	>90
ISO 9047	Joint movement capability	%	$\pm 50$

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

\*\*ISO: International Standardization Organization.

\*\*\*DIN: Deutsche Industrie Norm.

## TECHNICAL SPECIFICATIONS AND STANDARDS

Conforms to SNJF,  
ISO 11600-F&G-25LM.  
DIN 18540 Class F.

## HOW TO USE

### Surface preparation

Ensure that surfaces to be sealed are clean, dry, sound and grease-free. Clean non-porous surfaced with *Dow Corning® R40 Universal Cleaner*, and dry thoroughly with a clean, lint-free cloth before application of sealant. Porous substrates such as concrete, brickwork, mortar, etc. must be mechanically cleaned of loose particles using a steel brush, sanding disc or any similar means.

Note: When using any solvent, always provide adequate ventilation. Avoid heat, sparks and open flames. Use solvent resistant gloves. Observe and follow all precautions listed on solvent container label.

### Masking

Areas adjacent to the joints should be masked with tape to prevent contamination of the substrates and to ensure a neat sealant line. Masking tape should be removed immediately after tooling.

### Priming

Primers are not usually required but might be needed for some specific substrates for maximum adherence. Please contact us for technical assistance.

### Back-up materials

Where back-up material is required, closed cell polyethylene backer rod is recommended. Back-up materials provide back pressure and avoid three sided adhesion that limits sealant movement capability.

### Finishing

The joint should be tooled within 5 minutes of application to ensure good contact between the sealant and the substrate. Tooling of the sealant also gives a smooth, professional finish.

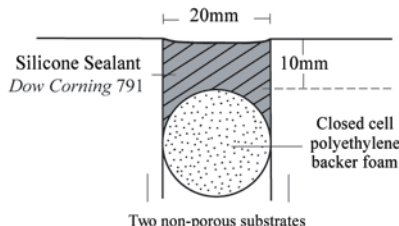
### Clean-Up

Excess sealant may be cleaned off tools and non-porous surfaces whilst in an uncured state using *Dow Corning R40 Universal Cleaner*. If sealant is misapplied to porous substrates, it should be left until it is just cured and then removed by peeling, cutting or other mechanical means. Care should be taken not to damage plastic or coated surfaces.

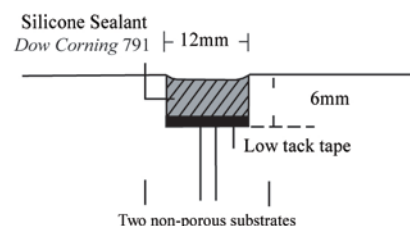
## JOINT DESIGN

The sealant joint width should be designed to accommodate the movement capability of the sealant. When designing joints using *Dow Corning 791 Silicone Weatherproofing Sealant*, the minimum width should be 6mm. For joints between 6-12mm wide, a seal depth of 6mm is required. For joints above 12mm wide, a width to depth ratio of 2:1 should be used. In situations where fillet joints are needed, a minimum of 6mm sealant bite to each substrate is recommended. For joint dimensions with a width greater than 25mm or a depth greater than 15mm, please contact one of Dow Corning's Regional Service Centers for technical assistance.

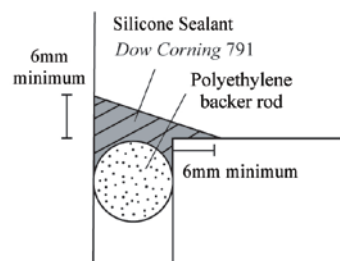
**Figure 1: Deep joint**



**Figure 2: Shallow joint**



**Figure 3: Fillet joint**



## TECHNICAL SERVICES

**Your Dow Corning contact details (e-mails):**

**Technical inquiries:**  
eutech.info@dowcorning.com

### Marketing:

construction.marketing@dowcorning.com

### Quality Bond:

qualitybond@dowcorning.com

### EHS inquiries:

europe.ehs@dowcorning.com

### Reach inquiries:

reachsupport@dowcorning.com

**Your Technical Service contact details (phone):**

**Toll Free Numbers:**

**From Belgium** 0800 80 522

**From France** 0805 54 04 39

**From Germany** 0800 52 50 258

**From Italy** 800 92 83 30

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**From United Kingdom**

0800 9172 071

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+32 64 88 86 86

**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 material safety data sheet is available on the Dow Corning Web site at [dowcorning.com](http://dowcorning.com). You can also obtain a copy from your local Dow Corning sales representative or Distributor or by calling your local Dow Corning Global Connection.

**USABLE LIFE AND STORAGE**

*Dow Corning 791 Silicone Weatherproofing Sealant* should be stored in cool and dry conditions.

When stored at or below 30°C (86°F) in the original unopened containers, *Dow Corning 791 Silicone Weatherproofing Sealant* has a usable life of 12 months from the date of production.

**PACKAGING INFORMATION**

*Dow Corning 791 Silicone Weatherproofing Sealant* is supplied in 310ml cartridges and 600ml sausages.

**COLORS**

*Dow Corning 791 Silicone Weatherproofing Sealant* is available in a broad range of colors. Please refer to the color chart for different options.

**LIMITATIONS**

Do not use *Dow Corning 791 Silicone Weatherproofing Sealant* on bituminous substrates, substrates based on natural rubber, chloroprene or EPDM or on building materials and flexible plastics which might bleed oils, plasticizers or solvents. Do not use *Dow Corning 791 Silicone Weatherproofing Sealant* in a totally confined space because the sealant requires atmospheric moisture to cure. *Dow Corning 791 Silicone Weatherproofing Sealant* is not recommended for use on submerged joints or in joints where physical abuse or abrasion is likely to occur. Bleeding can occur on porous substrates such as concrete, marble, granite or other natural stones. On sensitive substrates, specific testing should be carried out.

This product is not suitable for areas where food contact is likely.

*Dow Corning 791 Silicone Weatherproofing Sealant* is not recommended for structural glazing or insulated glazing applications.

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 Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our Web site, [dowcorning.com](http://dowcorning.com) or consult your local Dow Corning representative.

**LIMITED 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 our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that our products will meet the 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.****DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

*We help you invent the future.* <sup>TM</sup>

**[dowcorning.com](http://dowcorning.com)**

## Dow Corning® 791T Weatherproofing Sealant Transparent

### FEATURES

- Will accommodate up to 50 % joint movement
- Excellent unprimed adhesion to a wide variety of construction materials such as concrete, stone, masonry, brick, wood, steel, glass, glazed surfaces, painted or varnished wood and ceramics
- Ideal sealant for expansion, connection and other movement joints as its low modulus allows high movement but generates relatively low stress at the adhesion interface
- Conforms to ISO 11600-F&G 25LM

### BENEFITS

- Compatible with typical PVB foils. Project-specific testing available upon request
- Easy, conventional tooling
- Excellent resistance to weathering
- Good recovery after extension and compression
- High resistance to ozone, ultra violet radiation
- Excellent stability through wide temperature range: -50 °C to 150°C

One-part silicone sealant

### APPLICATIONS

- Dow Corning® 791T Weatherproofing Sealant is specifically formulated for the sealing of expansion joints in curtain walling facades, building facades and other structures. It is also suitable for the sealing of connection joints between floors and walls, stairs and other building connections.

### TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

CTM <sup>1</sup>	Property	Unit	Value
	Cure system		Oxime
	Application temperature	°C	+5 to +40
097B	Specific gravity	g/ml	1.03
364C	Extrusion	g/minute	100
155A	Penetration	1/10mm	125
098	Skin-over time (23°C, 50% R.H.)	minutes	10-15
095A	Tack-free time (23°C, 50% R.H.)	minutes	15-50
663A	Cure rate (23°C, 50% R.H.)		
	1 day	mm	3.0
	3 days	mm	4.0
	<b>2mm thickness S2 dumb-bells (ASTM<sup>2</sup> D412)</b>		
137A	E-Modulus 100%		0.30
137A	Tensile strength		1.3
137A	Elongation at break		575
	<b>12x12x50mm size T.A. joint (ISO<sup>3</sup> 8339/DIN<sup>4</sup> 52455-2)</b>		
677	E-Modulus 100%	MPa	0.32
677	Tensile strength		0.5
677	Elongation at break		300
677	Failure mode	%	100
		Cohesive Failure	
99E	Hardness	Shore A	15
0677	Elastic recovery (ISO 7389)	%	>90

The data presented have been obtained with unpigmented product.

<sup>1</sup>CTM: Corporate Test Method, copies of CTMs are available on request.

<sup>2</sup>ASTM: American Society for Testing and Materials.

<sup>3</sup>ISO: International Standardization Organization.

<sup>4</sup>DIN: Deutsche Industrie Norm.

## DESCRIPTION

*Dow Corning 791T Silicone Sealant* is a premium, one-part, easy to use, neutral curing transparent silicone sealant. It has excellent weatherability and flexibility. This low modulus silicone sealant has outstanding primerless adhesion to a wide variety of non-porous & porous substrates. Performance related to mildew and fungus resistance has been tested in accordance with the ISO-norm 846.

## TECHNICAL SPECIFICATIONS AND STANDARDS

ISO 11600-F+G-25LM  
ISO 846

## HOW TO USE

Please refer to Dow Corning Building Envelope Weatherproofing manual available on [dowcorning.com](http://dowcorning.com) for detailed information on application guidelines and joint design.

## Surface preparation

Surfaces must be clean, dry and free from grease, dust and frost. Non-porous surfaces such as aluminum, glass, etc., should be cleaned with a suitable solvent for the substrate such as *Dow Corning*® R40, isopropanol, etc. Porous surfaces such as concrete, brick, mortar, etc., should be mechanically cleaned using a steel brush, sanding disk, etc.

When using any solvent, always provide adequate ventilation. Avoid heat, sparks and open flames. Always observe and follow all precautions listed on solvent container labels.

*Dow Corning 791T Sealant* should not be applied to surfaces below 5°C or above 40°C as the adhesion of the sealant to the surface may be affected.

## Masking

It is recommended that the areas adjacent to the sealant joint are masked with an appropriate tape to prevent contamination of the substrate and to ensure a neat sealant line. Masking tape should be removed immediately after tooling and before the sealant starts to form a skin.

## Priming

*Dow Corning Primer P* is required for porous substrates. Consult *Dow Corning Technical Services* and / or *Dow Corning Primer Guide*.

## Back-up materials

Closed cell polyethylene backer rods are recommended as a joint back up material.

## Tooling

The applied sealant should be tooled within 5 to 10 minutes of application to ensure good contact between the sealant and the substrate. Tooling of the sealant also gives a smooth professional finish.

## TECHNICAL SERVICES

### Your Dow Corning contact

#### details (e-mails):

#### Technical inquiries:

[eutech.info@dowcorning.com](mailto:eutech.info@dowcorning.com)

#### Marketing:

[construction.marketing@dowcorning.com](mailto:construction.marketing@dowcorning.com)

#### Quality Bond:

[qualitybond@dowcorning.com](mailto:qualitybond@dowcorning.com)

#### EHS inquiries:

[europe.ehs@dowcorning.com](mailto:europe.ehs@dowcorning.com)

#### Reach inquiries:

[reachsupport@dowcorning.com](mailto:reachsupport@dowcorning.com)

## Your Technical Service contact details (phone):

### Toll Free Numbers:

**From Belgium** +0800 80 522

**From France** +0805 54 04 39

**From Germany** +0800 52 50 258

**From Italy** +800 92 83 30

**From Spain** +900 813161

**From United Kingdom**

+0800 9172 071

### All other countries:

**For English** +32 64 51 11 59

**For French** +32 64 51 11 59

**For German** +49 611 237503

**For Italian** +32 64 51 11 73

**For Spanish** +32 64 51 11 66

**For Russian** +7 495 725 43 19

### Fax number from all countries:

+32 64 88 86 86

## HANDLING

## PRECAUTIONS

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEB SITE AT [DOW CORNING.COM](http://DOWCORNING.COM), OR FROM YOUR DOW CORNING SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CORNING CUSTOMER SERVICE.

## USABLE LIFE AND STORAGE

When stored in cool, dry conditions below 30°C in the original unopened containers, *Dow Corning 791T Silicone Sealant* has a usable life of 12 months from the date of production.

## **PACKAGING INFORMATION**

*Dow Corning 791T Silicone Sealant* is available in 310ml cartridges (12 per box).

## **LIMITATIONS**

*Dow Corning 791T Sealant* should not be used against substrates that bleed oils, plasticizers or solvents. It is not recommended for use against certain plastics, generally of the flexible, plasticized type.

In situations where bleeding or staining is a risk, please contact Dow Corning for technical assistance

*Dow Corning 791T Sealant* has been generally tested for compatibility with some typical PVB foils. However, project-specific testing is strongly recommended with contact materials before any use.

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

## **HEALTH AND ENVIRONMENTAL INFORMATION**

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## **LIMITED 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 our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that our products will meet the 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.**

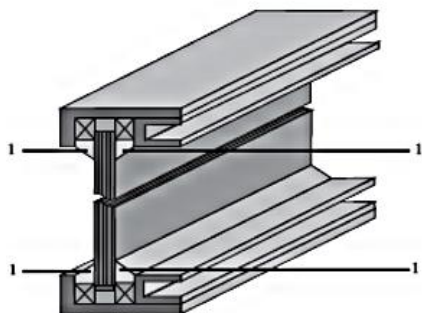
**DOW CORNING DISCLAIMS  
LIABILITY FOR ANY  
INCIDENTAL OR  
CONSEQUENTIAL DAMAGES.**

*We help you invent the future.* <sup>TM</sup>

**[dowcorning.com](http://dowcorning.com)**

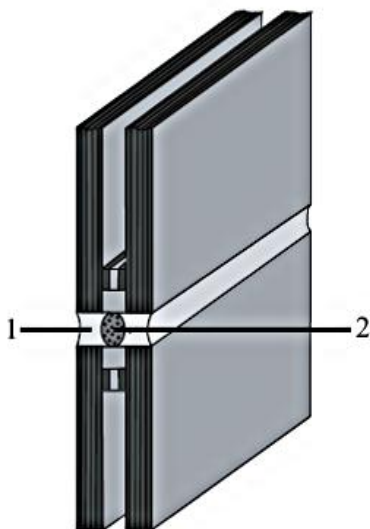
## Application Examples for *Dow Corning*® 791T Weatherproofing Sealant

**Figure 1:** Sloped roof glazing with butt joint, mechanically held on 2 sides.

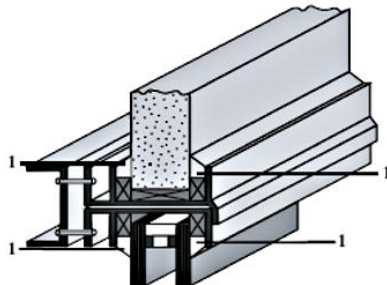


Designs possible with single or insulated units as shown, in sloped or vertical configurations. (Unit dimensions and glass thickness should be designed to limit deflections to comply with prevailing standards or design limits).

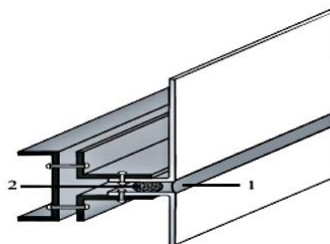
**Figure 2:**



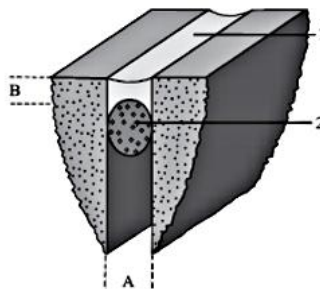
**Figure 3:** Design incorporating granite or reconstituted stone panels.



**Figure 4:** Design incorporating metallic panels



**Figure 5:** Recommended design for moving joints. Ratio of A:B should be 2:1.



### Legend

- 1. *Dow Corning*® 791T Silicone Sealant
- 2. Backer rod
- A. Joint sealant width
- B. Joint sealant depth