Product Information

DOW CORNING® 895
Structural Glazing Sealant

FEATURES

- Meets the newly developed European standards for structural glazing application, as developed by EOTA
- Excellent adhesion to a wide range of substrates including coated, enamelled and reflective glasses, anodised and polyester coated aluminium profiles and stainless steel profiles
- Odorless and non-corrosive cure system
- One-component product
- Resistant to ozone and temperature extremes

BENEFITS

- The cured product exhibits excellent weathering characteristics, and a high resistance to ultra-violet radiation, heat and humidity
- High ultimate tensile strength makes it ideally suited for structural bonding applications
- Excellent mechanical properties

APPLICATIONS

- One component silicone sealant for structural glazing.

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.

<table>
<thead>
<tr>
<th>Test method*</th>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>As supplied</td>
<td>Specific gravity</td>
<td>g/ml</td>
<td>1.43</td>
</tr>
<tr>
<td></td>
<td>Slump or flow</td>
<td>mm</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Tack-free time (25°C/77°F, 50% R.H.)</td>
<td>minutes</td>
<td>40 to 60</td>
</tr>
<tr>
<td></td>
<td>Cure schedule (25°C/77°F, 50% R.H.)</td>
<td>mm</td>
<td>- after 24 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- after 72 hours</td>
</tr>
</tbody>
</table>

(See also Optimal Glazing Conditions)

As cured - after 7 days at 25°C (77°F) and 50% RH

<table>
<thead>
<tr>
<th>Test method</th>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM D2240</td>
<td>Durometer hardness, Shore A</td>
<td>Points</td>
<td>38</td>
</tr>
<tr>
<td>ASTM D0412</td>
<td>Ultimate elongation</td>
<td>%</td>
<td>600</td>
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<tr>
<td>ASTM D0412</td>
<td>Tensile strength, at 100% elongation</td>
<td>MPa</td>
<td>0.7</td>
</tr>
<tr>
<td>ASTM D0412</td>
<td>Tensile strength, at ultimate elongation</td>
<td>MPa</td>
<td>2.85</td>
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<tr>
<td>ASTM D624</td>
<td>Tear strength</td>
<td>kN/m</td>
<td>19</td>
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</table>

H-Piece Testing

<table>
<thead>
<tr>
<th>Test method</th>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 8339</td>
<td>Ultimate elongation</td>
<td>%</td>
<td>260</td>
</tr>
<tr>
<td>ISO 8339</td>
<td>Tensile strength</td>
<td>MPa</td>
<td>1.06</td>
</tr>
<tr>
<td>ISO 8339</td>
<td>Young modulus</td>
<td>MPa</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Sealant dynamic design load</td>
<td>Pa</td>
<td>140,000</td>
</tr>
<tr>
<td></td>
<td>Sealant static design load</td>
<td>Pa</td>
<td>7,000</td>
</tr>
<tr>
<td></td>
<td>Service temperature range</td>
<td>°C</td>
<td>-50 to +150</td>
</tr>
<tr>
<td></td>
<td></td>
<td>°F</td>
<td>-58 to 302</td>
</tr>
<tr>
<td></td>
<td>Working time</td>
<td>minutes</td>
<td>15</td>
</tr>
</tbody>
</table>

DESCRIPTION
DOW CORNING 895 is a one-part, neutral curing silicone sealant designed specifically for the structural bonding of glass, metal, and other building components.

It can also be used to adhere stiffening elements to building panels and for other similar adhesive applications.

Neutral alkoxy cures at room temperature on exposure to water vapour in the air, giving off a small amount of methanol.

TECHNICAL SPECIFICATIONS AND STANDARDS
DOW CORNING 895 Sealant exhibits a high level of physical properties and adhesive performance which are retained even after aging as detailed by EOTA (Ref. INV 96/BE.35).

- 2000 hours exposure to ultra-violet radiation in hot water immersion (ISO DIS 11431, UBAte ATG00/H716).
- 5000 load cycles in tension (ISO 846, UBAte ATG00/H716).
- Resistance to SO₂ and salt spray (ISO 3231 and ISO 9227NSS, UBAte ATG00/H716).
- Resistance to cleaning agent (ISO/DIS 10591).
- Resistance to extreme temperature (EN 28-339, UBAte ATG00/H716).
- 4000 hours exposure to ultra violet radiation under maintained extension at 12.5% (Ref: CSTB GM 90-8).

INSTALLATION
For structural glazing use, DOW CORNING 895 Sealant should be factory-applied. Factory application helps ensure optimal sealing conditions and performance. Job-site application should only be carried out for remedial work, or when the glazing design does not allow otherwise.

This adhesive meets the newly developed European Standard for structural glazing application the EOTA guidelines for SSGS.

Joint design
As a general rule, structural sealant joints made with DOW CORNING 895 Sealant should have a width between 6mm and 15mm. However, the exact width is determined by the structural calculations. The width (dimension y) of the structural sealant joint should also be calculated to accommodate thermal and dynamic movements but as a rule should not be less than 6mm and ideally in a 3:1 ratio (width:depth).

Accessory selection
The appropriate selection of all accessories such as setting blocks and backing materials is of primary importance in avoiding discoloration or adhesion-related problems due to incompatibility. Dow Corning will also assess the suitability of proposed accessory materials as part of the standard testing services. Closed cell polyethylene foam is the recommended backer material for most joints. Silicone-based setting blocks are generally recommended for best compatibility.

Some typical examples of joint designs are shown in Figures 2 and 5.

Optimal glazing conditions
Ideally, all glazing should be done in-factory and within the following conditions of temperature and humidity:

Temperature conditions: 5°C to 40°C (41-104°F)
Humidity conditions: 40% to 95%

Recommended temperatures range:
15°C and 30°C (59-86°F)

Certain conditions will ensure a cure schedule sufficient to allow transportation of the glazed modules within 21 days, depending on joint configuration. Consult Dow Corning for specific advice.

Preparatory work
Thoroughly clean all joints and glazing pockets, removing all contaminants such as grease, oil, dust, frost or water. All metal, glass, or other surfaces should be cleaned with the recommended solvent, using a lint free cloth. The solvent should not be allowed to evaporate on its own from the surface.

 Priming
Priming is not usually required when using DOW CORNING 895 Sealant. However, it is essential that adhesion be tested prior to use. Specific primer recommendations will be made by Dow Corning Technical Services Department on a project basis. Please contact Dow Corning for further advice.

Masking and tooling
Areas adjacent to joints may be masked to ensure neat sealant lines. Do not allow masking tape to touch clean surfaces to which the sealant is to adhere. Tooling should be completed in one continuous stroke within 5 minutes after sealant application and before a skin forms. Remove masking tape immediately after tooling and before the sealant has started to form a skin.

Application method
Install the backing material, setting blocks and spacer tapes as specified. Apply DOW CORNING 895 Sealant in a continuous operation using positive pressure to properly fill and seal the joint. Tool the sealant with slight pressure to spread it against the backing material and the joint surfaces. A tool with a concave profile is recommended to keep the sealant within the joint.

MAINTENANCE
Dow Corning makes specific recommendations concerning on-site verification of adhesion and compatibility of the sealant joints.
These are to be carried out periodically as per recommendations and are designed to help ensure the long term, problem-free performance of the structurally sealed modules. Damaged joints may be repaired using DOW CORNING 895 Sealant. The product will adhere to cured neutral silicone sealants from Dow Corning provided these exhibit a clean knife-cut or abraded surface.

**TECHNICAL SERVICES**

Consult Dow Corning’s Technical Services departments for further advice on specific applications:

- Dow Corning S.A.
  - Construction Technical Service
  - Parc Industriel
  - B-7180 Seneffe - Belgium
  - Tel : INT + 32 (0)64 88 80 00
  - Fax : INT + 32 (0)64 88 84 01
- Dow Corning GmbH
  - Rheingaustraße 34, Postfach 130332
  - D-65091 Wiesbaden, Germany
  - Tel : INT + 49 (0)611 - 23 71
  - Fax : INT + 49 (0)611 - 237 610
- Dow Corning Ltd.
  - Meriden Business Park
  - Copse Drive, Allesley, Coventry,
  - CV5 9RG - United Kingdom
  - Tel : INT + 44 (0)1676 52 80 00
  - Fax : INT + 44 (0)1676 52 81 00

**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 30°C (86°F) in the original unopened containers, DOW CORNING 895 Sealant has a usable life of 12 months from the date of production.

**PACKAGING**

This product is available in 184 liter drums, 20 liter pails, 310ml cartridges (12 per box) and 600ml sausages.

**LIMITATIONS**

DOW CORNING 895 Sealant should not be used for structural applications without the prior written approval of Dow Corning Construction Industry Technical Services Department. Each project should be specifically and separately approved by Dow Corning.

Project specific approval involves the following prerequisites:
- Joint dimensioning and print reviews.
- Successful laboratory adhesion and compatibility testing to all building components.
- Observance of professional sealant application and workmanship standards.
- Users should always consult Dow Corning Technical Services Department for adhesion recommendation.

Dow Corning shall not be held liable for any possible claims arising from structural glazing use of DOW CORNING 895 Sealant for projects which have not been specifically approved by Dow Corning.

For projects which have been approved, Dow Corning will issue a structural adhesion warranty on a case by case basis at the user's request. It is the user's exclusive responsibility to ensure project compliance with local building regulations. Because of the risk of incompatibility, DOW CORNING 895 Sealant should not come into contact with, or be exposed to, sealants that liberate acetic acid.

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.
Typical Examples of Joint Design

Figure 2: System for 2-sided structural glazing.

Figure 3: System for 4-sided structural glazing.

Figure 4: Design with supported insulating glass unit.

Figure 5: Design with stepped insulating glass unit.

Legend

1. Insulating glass unit
2. Silicone structural seal (DOW CORNING 895 Structural Glazing Sealant)
3. Silicone rubber spacer block
4. Silicone setting block
5. Aluminium profile
6. Backer rod
7. Structural sealant width
8. Structural sealant bite
9. Weatherseal dimension
10. Silicone weatherseal (DOW CORNING® 897 Natural Stone and Facade Sealant)
11. Silicone insulating glass seal (DOW CORNING® 3362 Insulating Glass Sealant)