Product Information
High Performance Building

**Dow Corning® 813C Construction and Concrete Silicone Sealant**

Neutral silicone sealant

**APPLICATIONS**

- **Dow Corning® 813C Construction and Concrete Silicone Sealant** is a one-part, neutral curing, low modulus silicone sealant particularly suitable for interior and exterior applications, such as external weather seals, expansion joints and perimetral joints in buildings and other types of construction. **Dow Corning 813C Silicone Sealant** offers durable adhesion to a range of porous and non-porous surfaces including concrete, masonry, brick, PVC-U, wood and some metals used in construction without danger of corrosion from the sealant.

**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.

<table>
<thead>
<tr>
<th>Test</th>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Cure system</td>
<td></td>
<td>Alkoxy</td>
</tr>
<tr>
<td></td>
<td>Service temperature</td>
<td>°C</td>
<td>-40 to +149</td>
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<tr>
<td></td>
<td>Application temperature</td>
<td>°C</td>
<td>+5 to 50</td>
</tr>
<tr>
<td>CTM 97B</td>
<td>Specific gravity</td>
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<td>1.51</td>
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<tr>
<td>CTM 364C</td>
<td>Extrusion rate</td>
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<tr>
<td>CTM 98B</td>
<td>Skin-over time (23°C, 50% R.H.)</td>
<td>minutes</td>
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<tr>
<td>CTM 95A</td>
<td>Tack-free time (23°C, 50% R.H.)</td>
<td>minutes</td>
<td>30</td>
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<tr>
<td>CTM 663A</td>
<td>Cure rate (23°C, 50% R.H.)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>1 day</td>
<td>mm</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>3 days</td>
<td>mm</td>
<td>4.0</td>
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<tr>
<td></td>
<td><strong>2mm thickness S2 dumb-bells</strong> (ISO 37/DIN 53 504)</td>
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<tr>
<td>CTM 137A</td>
<td>Modulus 100%</td>
<td>MPa</td>
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<td>CTM 137A</td>
<td>Tensile strength</td>
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<td>CTM 137A</td>
<td>Elongation at break</td>
<td>%</td>
<td>700</td>
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<tr>
<td>CTM 677</td>
<td>Modulus 100%</td>
<td>MPa</td>
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<td>CTM 677</td>
<td>Tensile strength</td>
<td>MPa</td>
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<td>CTM 677</td>
<td>Elongation at break</td>
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<td>CTM 99E</td>
<td>Hardness (Shore A)</td>
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<td>ISO 7389</td>
<td>Elastic recovery</td>
<td>%</td>
<td>&gt;90</td>
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<tr>
<td>ISO 9047</td>
<td>Joint movement capability</td>
<td>%</td>
<td>±50</td>
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CTM: Corporate Test Method, copies of CTMs are available on request.
DIN: Deutsche Industrie Norm.
ISO: International Standardization Organization.
TECHNICAL SPECIFICATIONS AND STANDARDS
Conforms to SNJF Façade.
ISO 11600-F-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. For specific advice, please contact your local Technical Services.

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 813C Silicone 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 your local Technical Services.

Figure 1: Deep joint

Figure 2: Shallow joint

Figure 3: Fillet joint

TECHNICAL SERVICES
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**USABLE LIFE AND STORAGE**

*Dow Corning* 813C Silicone Sealant should be stored in cool and dry conditions.

When stored at or below 30°C in the original unopened containers, *Dow Corning* 813C Silicone Sealant has a usable life of 12 months from the date of production.

**PACKAGING INFORMATION**

*Dow Corning* 813C Silicone Sealant is supplied in 310ml cartridges packed in boxes of 12 and 600ml sausages packed in boxes of 20.

**COLORS**

*Dow Corning* 813C Silicone Sealant is available in the following colors: white, stone, sand, desert rose, grey, red beige, pink coral, anthracite, brown, bronze, black, dark brown, custom color.

**LIMITATIONS**

Do not use *Dow Corning* 813C Silicone 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* 813C Silicone Sealant in a totally confined space because the sealant requires atmospheric moisture to cure. *Dow Corning* 813C Silicone 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 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* 813C Silicone Sealant is not recommended for structural glazing, insulated glazing or other 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 website, 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.

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