Contite® PUE 400/E401

A TWO IN ONE POLYURETHANE INJECTION RESIN

DESCRIPTION

Contite PUE 400/E401 is a 2 component hydrophobic polyurethane 2 in 1 injection resin system. When Contite PUE 400/E401 comes in to contact with water it reacts rapidly to form flexible foam which stops leakage of water from the concrete crack, if injected in dry conditions it forms a solid elastic resin to permanently seal the crack.

Complies to EN1504 Part 9 and EN1504 Part 5 Class (D) - Principle 1 : Protection Against Ingress (PI).

Method 1.5 - Filling Cracks.

USES & ADVANTAGES

Contite PUE 400/E401 is a rapid reacting resin used to stop the water leakage in the short term as well as to form a solid resin for permanent sealing of cracks. Contite PUE 400/E401 is used to stop water penetration or react away water in cracks, voids or soil. The resin can be injected using one component pump.

Uses include for:
• Injection to dry wet cracks.
• Stopping water seepage.
• Sealing leaking cracks & voids.
• Injection in leaking diaphragm walls.

Typical areas of use include:-
Sealing leaks in tunnels, basements, subways, pipe lines, manholes, dams, reservoirs, pools, water tanks etc.

Advantages:
• 2 in 1 system: only one product needed at jobsite.
• Simple mix ratio 1:1 by weight and volume.
• Reinjection through the same packers as initial.
• Solvent & filler free.
• Good adhesion to substrate.
• Insignificant shrinkage, stable when cured.
• Controlled expansion reacting away the water no "Sponge" effect.
• MDI based safer than TDI types.

PROPERTIES

<table>
<thead>
<tr>
<th>Properties</th>
<th>For Part A</th>
<th>For Part B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Light yellow liquid</td>
<td>Dark brown liquid</td>
</tr>
<tr>
<td>Viscosity (mPa.s)</td>
<td>120-150 1.03-1.05</td>
<td>100-200 1.13-1.15</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>20-40 Minutes</td>
<td></td>
</tr>
<tr>
<td>Pot life</td>
<td>15-20 Minutes</td>
<td></td>
</tr>
<tr>
<td>Gel time</td>
<td>Mixed Material</td>
<td></td>
</tr>
<tr>
<td>Volume expansion</td>
<td>Foam Properties</td>
<td></td>
</tr>
<tr>
<td>(Freely foaming)</td>
<td>Max.30</td>
<td></td>
</tr>
<tr>
<td>Reaction time</td>
<td>Approx. 20-60 seconds</td>
<td></td>
</tr>
<tr>
<td>Expansion time</td>
<td>Approx. 2 - 5 minutes</td>
<td></td>
</tr>
<tr>
<td>Application temp.</td>
<td>+5°C to +50°C (41°F to 122°F)</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 100°C (212°F)</td>
<td></td>
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</tbody>
</table>

MIX RATIO

Contite PUE 400 : Contite PUE401 = 1:1 by weight.
or
Contite PUE 400 : Contite PUE401 = 1:1:1 by volume.

INSTRUCTIONS FOR USE

Depending on the status of crack, wet or dry the gel time should be fixed before injection. The blended material can be pumped by the use of a single component injection pump equipped for high pressure.

If cracks or voids are dry flush by injecting with clean water before resin injection. To prevent condensation on the liquids at the beginning of work the temperature of the components should be at least as high as ambient temperature. All opened drums should be capped when not in use.

Note : Contite PUE 400/E401 is suitable for stopping water leakages. Where water pressure < 1 bar.

MIXING

Mix part A & B using a slow speed drill and paddle (400 rpm.). Mix the material approx. 2-3 minutes until a homogeneous mixture is formed.

APPLICATION

Contite PUE 400/E401 is used to stop water penetration or react away water in cracks, voids or soil. It is injected as a single component via injection packers into the water bearing zones using a manual pump or electrical injection pump. When in contact with water, the PU foams up strongly and hardens. Inject Contite PUE 400/E401 until the resin is discharged as foam from the adjoining drill hole or respectively the surface of crack. The follow up injection has to be carried out within the pot life of the initially injected material. (When filling large, wet voids inject in two stages. Waiting time between the first and second injection is at least 1-2 hours.)

For stopping water leakage:
• For vertical cracks or inclined cracks begin by pumping material into the bottom entry port. Material will react with leaking water forming flexible foam and stop water. Keep injecting until the material appears above the bottom entry. Disconnect and start injection at the above packer.
• For horizontal cracks the injection should proceed from one end of the crack to the other in the same manner.
For crack sealing:
- Crack width: 3-10 mm.
- For vertical cracks or inclined cracks begin by pumping material into the bottom entry port. Material will react and for a solid elastic resin to seal the cracks. Keep injecting until the material appears above the bottom entry. Disconnect and start injection at the above packer.
- For horizontal cracks the injection should proceed from one end of the crack to the other in the same manner. The crack is full if the pressure can be maintained.

**PACKAGING**

20 kg (44 lb) set; Contite PUE 400 10 kg (22 lb) & Contite PUE 401 10 kg (22 lb) in steel packaging. Other packing units are available on request.

**STORAGE CONDITIONS & SHELF LIFE**

Store in the shade in dry conditions. Stored in well-sealed drums, in a dry area, at temperatures of 5°C-35°C, the shelf life is approximately 12 months in unopened drums.

**HEALTH & SAFETY**

Avoid skin and eye contact. Wear rubber gloves and safety goggles. Hands should be cleaned with cleaner, followed by soap and water avoid breathing of vapours; use with adequate ventilation.

Please consult our MSDS for more information (available upon request).

**TECHNICAL SERVICE**

The Cormix International Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

**QUALITY ASSURANCE**


**DISCLAIMER**

Performance data is achieved testing in accordance with International Standards. Testing by others may result in different results from those published as a result of external factors such as poor sampling, incorrect mixing, varying temperatures, curing, crushing procedures etc.

Cormix does not take responsibility nor need to defend others testing that does not achieve the published data. The user must test the product’s suitability for the intended application and purpose. Cormix reserves the right to change the properties of the product. Site conditions and differences in materials are such that no warranty or fitness for a particular purpose, nor liability can be inferred from the published data sheet, written recommendations or from other advice offered.

**CONTACT DETAILS**

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