PROTEGOL® EPN Coating 180
two-component epoxy coating

Description

PROTEGOL® EPN Coating 180 is a two-component epoxy-phenol-novolac coating. The product meets the requirements of DIN EN 10289:2002. Application is made by 2K airless hot spray system.

Uses

External coating of
• Pipes, pipe bends
• Fittings
• Field joints
• Tanks, containers

Internal coating of
• Pipes, pipe bends

Benefits

• Abrasion and impact-resistant
• High temperature resistance
• High resistance against cathodic disbonding up to 180 °C
• Good chemical resistance

Product data

The following data has been obtained at +23°C unless otherwise stated:

Type                epoxy-phenol-novolac

Component A (base)  epoxy-phenol-novolac
Component B (hardener) amine

Physical state:
Component A  pasty
Component B  liquid

Viscosity

<table>
<thead>
<tr>
<th>Component</th>
<th>Temperature</th>
<th>Viscosity (mPa*s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>25 °C</td>
<td>17000</td>
</tr>
<tr>
<td></td>
<td>60 °C</td>
<td>740</td>
</tr>
<tr>
<td>A + B</td>
<td>25 °C</td>
<td>2700</td>
</tr>
<tr>
<td></td>
<td>60 °C</td>
<td>400</td>
</tr>
</tbody>
</table>

Density (g/cm³)

<table>
<thead>
<tr>
<th>Component</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1,60</td>
</tr>
<tr>
<td>B</td>
<td>1,40</td>
</tr>
<tr>
<td>A + B</td>
<td>1,53</td>
</tr>
</tbody>
</table>

Mixing Ratio Comp A : Comp B

Gravimetric: 70:30
Volumetric: 2,0:1,0

Coating properties

Recommended dry film thickness (DFT) ≥800 μm

Actual required DFT may vary in certain applications, please contact us for technical clarification.

Service temperature -20 °C to 180 °C
Short term temperature load without temperature gradient to the substrate 200 °C
T min substrate 10 °C

Min. +3°C above dew point

Processing temperature

Component A 50 °C to 80 °C
Component B 50 °C to 80 °C

Max. rel air humidity 80 %

Potlife at 60 °C 10 min

Hardness Shore D 90±5

Referenced standards

DIN EN 10289:2002  Steel tubes and fittings for onshore and offshore pipelines - External liquid applied epoxy and epoxy-modified coatings
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Impact resistance (max. impact energy) 6 J/mm
Adhesion to steel, pull off test 16 MPa

Cathodic disbondment after 28 d
at 23 °C (DIN EN 10289:2002) 2,8 mm
at 150°C (CSA Z245.20-18) 10,8 mm
at 180°C (CSA Z245.20-18) 11,2 mm

Specific electrical insulation resistance
after 100 d at 23 °C 5*10^10 Ωm²

Adhesion to steel after thermal aging
after 100 d at 100 °C 9 MPa
Elongation at break [%] >3
Cleaning agent Solvent G

Colours

Grey
Other colours on request (subject to technical feasibility and minimum order quantities)

Coverage, theoretical

Approx. 1,53 kg/m² at 1.000 µm DFT and not considering excess consumption.

Packaging

Component A Component B
barrel 300,00 kg barrel 250,00 kg
hobbock 30,00 kg hobbock 30,00 kg

Shipping and Storage Regulations, Application, Health and Safety

Storage:
In a cool and dry place shelf life is approx. 12 months in tightly closed original packs.

Maintenance of tools:
Immediately after use, all tools should be cleaned with Solvent G.

Refer to our general work instructions for PROTEGOL® Coatings.

Refer to our safety data sheets prior to use.
Carefully read and follow all safety instructions on labels and packaging. Handle and store material with care in accordance to the safety data sheets. Follow and observe any applicable local or national laws and regulations.
Regulations regarding explosion protection with regard to the construction and equipment of facilities (machines) can be found, among other sources, in the corresponding harmonized European standard (DIN EN 16985 "Spray booths for organic coating material - Safety requirements" (former DIN EN 12215 and DIN EN 13355); furthermore, local laws and/or regulations must be observed.
Contact us to make sure you have the latest version of safety data sheet, technical data sheet and work instruction at hand.