PROTEGOL® UR Coating 32-45
two-component polyurethane coating

Description
PROTEGOL® UR Coating 32-45 is a two-component polyurethane coating. The product meets the requirements of DIN EN 10290:2002, AWWA C222-99, UBA Guideline (UBA Leitlinie). Application is made by 2K airless hot spray system.

Uses
Internal and external coating of
• Pipes, pipe bends
• Fittings
• Tanks, containers
• Piling pipes

Benefits
• Good corrosion protection
• Certified acc. to UBA Guideline
• Certified acc. to DVGW W270, microbiological expertise
• Abrasion-resistant and impact-resistant
• Good chemical resistance

Referenced standards
DIN EN 10290:2002  Steel tubes and fittings for onshore and offshore pipelines - External liquid applied polyurethane and polyurethane-modified coatings
AWWA C222-99  AWWA Standard for Polyurethane Coatings for the Interior and Exterior of Steel Water Pipe and Fittings
UBA Leitlinie  Guideline for hygienic assessment of organic coatings in contact with drinking water for pipes >DN300, containers, equipment
DVGW W 270, 11.1999  Microbial Enhancement on Materials to Come into Contact with Drinking Water - Testing and Assessment
Real Decreto 118/2003  Real Decreto 118/2003, de 31 de enero, por el que se aprueba la lista de sustancias permitidas para la fabricación de materiales y objetos plásticos destinados a entrar en contacto con los alimentos y se regulan determinadas condiciones de ensayo.

Product data
The following data has been obtained at +23°C unless otherwise stated:
Type  polyurethane
Component A (base)  polyol
Component B (hardener)  isocyanate

Physical state:
Component A  pasty
Component B  pasty

Viscosity
Comp. A at 50 °C  2600 mPa*s
Comp. B at 25 °C  200 mPa*s

Density (g/cm³)
Comp. A  1,49
Comp. B  1,24
Comp. A + B  1,43

Mixing Ratio Comp A : Comp B
Gravimetric  78,5:21,5
Volumetric  3,0:1,0

Coating properties
Recommended dry film thickness (DFT)  ≥1500 µm
Actual required DFT may vary in certain applications, please contact us for technical clarification.

Overcoating period, min.  3 min

Service temperature  -20 °C to 80 °C
Short term temperature load without temperature gradient to the substrate  110 °C
T min substrate  10 °C

Min. +3°C above dew point

Processing temperature
Component A  50 °C / 80 °C
Component B  20 °C / 50 °C

Max. relative air humidity  80 %

Potlife at 60 °C  30 sec.

Hardness Shore D (±5)  70 ±5
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Impact resistance (max. impact energy) 11 J/mm
Adhesion to steel, pull off test 17 MPa
Cathodic disbondment after 28 d at 23 °C 3,70 mm
Specific electrical insulation resistance after 100 d at 23 °C $1 \times 10^9$ Ωm²
Thermal aging, adhesion, pull off test after 100 d at 100 °C 20 MPa
Flexural strength Req. fulfilled
Elongation at break [%] 16
Cleaning agent Solvent B, G
Repair material PROTEGOL PU Repair Material, PROTEGOL UR Coating 32-45/55L

Colours

RAL 5005 - Signal blue
RAL 7000 - Squirrel grey
Other colours on request (subject to technical feasibility and minimum order quantities)

Coverage, theoretical

Approx. 1,43 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 25,00 kg

Shipping and Storage Regulations, Application, Health and Safety

Storage:
In a cool and dry place shelf life is approx. 24 months in tightly closed original packs.

Maintenance of tools:
Immediately after use, all tools should be cleaned

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