



# TIBCHEMICALS

## PROTEGOL® UR Coating 32-45 R Systems two-component polyurethane coating

### Description

PROTEGOL® UR Coating 32-45 R Systems is a two-component polyurethane coating. The product meets the requirements of DIN EN 10290:2002. Application is made by 2K airless hot spray system. The product is available in various rheological settings that were developed for special processing requirements without affecting the product itself. Contact the TIB Chemicals sales team for information.

### Uses

Internal and external coating of

- Pipes, pipe bends
- Fittings
- Tanks, containers
- Piling pipes

### Benefits

- Good corrosion protection
- Abrasion resistant
- 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

### 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	2500 mPa*s
Comp. B at 25 °C	200 mPa*s

Density (g/cm <sup>3</sup> )	
Comp. A	1,50
Comp. B	1,24
Comp. A + B	1,44

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
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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 to 80 °C
Component B	20 °C to 50 °C

Max. relative air humidity	80 %
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Potlife at 60 °C	30 sec.
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Hardness Shore D	70 ±5
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Impact resistance (max. impact energy)	8 J/mm
Adhesion to steel, pull off test	11 MPa
Cathodic disbondment after 28 d at 23 °C	4,60 mm
Specific electrical insulation resistance after 100 d at 23 °C	11x10 <sup>9</sup> Ωm <sup>2</sup>
Thermal aging, adhesion, pull off test after 100 d at 100 °C	16 MPa
Flexural strength	Req. fulfilled
Elongation at break [%]	18
Cleaning agent	Solvent B, G
Repair material	
PROTEGOL PU Repair Material, PROTEGOL UR Coating 32-45/55L	

### Colours

RAL 1015 - Light ivory  
RAL 7000 - Squirrel grey  
RAL 9011 - Graphite black  
Other colours on request (subject to technical feasibility and minimum order quantities)

### Coverage, theoretical

Approx. 1,44 kg/m<sup>2</sup> 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

with Solvent B, 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.

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