



# TIBCHEMICALS

## PROTEGOL® UR Coating 32-55 R Systems solvent-free two-component polyurethane coating

### Description

PROTEGOL® UR Coating 32-55 R Systems is a two-component polyurethane coating. The product meets the requirements of DIN EN 10290, 08.2004, DIN 3476-2:2018-08.

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
- Piling pipes
- Tanks, containers

### Benefits

- Good corrosion protection
- Abrasion resistant
- Impact resistant
- Good chemical resistance

### Referenced Standards

**DIN EN 10290, 08.2004** Steel tubes and fittings for onshore and offshore pipelines - External liquid applied polyurethane and polyurethane-modified coatings  
**DIN 3476-2:2018-08** Valves - Requirements and tests - Part 2: Protection against corrosion by duromer thick coating

### 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	viscous
Component B	liquid

Viscosity	
Comp. A at 50 °C	3000 mPa*s
Comp. B at 25 °C	100 mPa*s

Density (g/cm <sup>3</sup> )	
Comp. A	1,67
Comp. B	1,24
Comp. A + B	1,57

Mixing ratio Comp A : Comp B	
Gravimetric	82:18
Volumetric	3,3:1,0

### Coating properties

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

Service temperature	-20 °C to 80 °C
Short term temperature load without temperature gradient to the substrate	110 °C
Minimum surface temperature min. +3°C above dew point	10 °C
Processing temperature	
Component A	50 °C to 80 °C
Component B	20 °C to 50 °C

Max. rel air humidity	80 %
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Potlife at 60 °C	40 sec.
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### Coating properties according to DIN EN 10290:2002/10289:2002 (typical values)

according DIN EN ISO 686 (1 sec.)	
Hardness Shore D (±5)	75

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according DIN EN ISO 686 (15 sec.)

hobcock 30,00 kg

hobcock 25,00 kg

Impact resistance (max. impact energy) 8 J/mm  
Adhesion to steel 23 MPa

Cathodic disbondment after 28 d  
at 23 °C 4,70 mm

Specific electrical insulation resistance  
after 100 d at 23 °C 9,3x10<sup>9</sup> Ωm<sup>2</sup>

Thermal aging, adhesion ( 100 d) 18 MPa (100° C)  
Flexural strength pass  
Elongation at break 19 %

### Coating properties according to DIN 3476-2 (typical values)

Resistance to thermal aging pass (in air)  
Resistance to thermal aging 13 MPa (in water)  
Spec. el. insulation resistance (23° C) 3,6\*10<sup>10</sup> Ωm<sup>2</sup>  
Spec. el. insulation resistance (70° C) 2,4\*10<sup>6</sup> Ωm<sup>2</sup>  
Elongation at break 15 %  
Adhesion (DIN EN ISO 4624) 23 MPa  
Cathodic disbondment 4,5 mm (28 d, 23° C)  
Cathodic disbondment 4,7 mm (2 d, 80° C)

### Coating properties according to other standards (typical values)

Cleaning agent Solvent B, G  
Repair material PROTEGOL® PU Repair Material PROTEGOL®  
UR Coating 32-45/55L

### Colours

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

### Coverage, theoretical

Approx. 1,57 kg/m<sup>2</sup> at 1.000 µm DFT and not  
considering excess consumption.

### Packing

<b>Component A</b>	<b>Component B</b>
IBC 1350,00 kg	barrel 250,00 kg
barrel 300,00 kg	barrel 250,00 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.

Solvent-free: The product does not contain any  
volatile organic ingredients (VOC) according to  
regulation 814.018 (VOCV) of Switzerland  
(Verordnung 814.018 über die Lenkungsabgabe auf  
flüchtigen organischen Verbindungen (VOCV))  
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 with 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 (BS EN 16985:2018-12-14  
"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.

#### Important Notice:

*The information on the properties of the product components represent average  
values that correspond to our defined quality specifications. Our products are  
manufactured and controlled in accordance with strict quality management and  
quality control requirements, which are subject to ISO 9001: 2015 certification.  
Information on the default values defined by us are given in the acceptance test  
certificates. The product properties marked as "typical values" are taken from the test  
reports of external institutes, unless otherwise stated.  
The information in our documents in printed or electronic form is based on our  
knowledge and experience. Due to numerous possible influences in the processing and  
application of our products, our statements do not release the processor from the  
responsibility to test the goods for their own procedures and purposes; Legally  
binding assurance of certain properties or suitability for a specific application cannot  
be derived from our information. It is the responsibility of the recipient of our products  
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