

# POLYTON®-UR

top coat

(TS 2312-029-12288779-2002)



## Description

POLYTON-UR is a single-pack moisture curing polyurethane top coat.

## Recommended use

Anticorrosive protection of metal, concrete and reinforced concrete structures used in atmospheric conditions of all macroclimate areas, types of atmosphere and placement categories according to GOST 15150.

Used in coating systems as:

- intermediate coat with zinc-rich ZINOTAN, ZINEP, ZFES and other polyurethane, epoxy, epoxy-ester and organic-silicone based primers and POLYTON-UR (UV) and other acrylic-urethane and acrylic top coats.

- top coat, in case of no intensive sun radiation (do not use as finishing coating in open atmospheric conditions, placement category 2, 3, 4 according to GOST 15150).

POLYTON-UR coating is resistant to water, oil and oil products.

## Certificates, approvals

State registration certificate No. RU.66.01.40.015.E.000145.12.10 dated 20.12.2010

Conformity certificate with fire-proof coatings PLAMCOR-2 and PLAMCOR-3.

**Industrial and civil constructions:** GOST 9.401, guidance document Trest Gidromontazh (РД ГМ-02-18).

**Transport construction:** standards STO-01393674-007-2022 and STO-01393674-008-2021 of Central Research Institute of Transport Construction, STO 12288779-001-2020 ("Avtodor"), technical regulations TR12288779.02073.00007 (Central Research Institute of Transport Construction); standard technical regulations 12288779.02073.00058 for railroad bridges painting (RZD Holding).

**Oil and gas industry:** complies with the requirements of regulatory documents of companies Rosneft, Lukoil, Irkutsk Oil Company.

Decisions of Research Institute of Coating Industry with Experimental Mechanical Plant "Viktoriya", Melnikov Central Research and Design Institute of Steel Structures, Central Research Institute of Transport Construction, Scientific and Research Institute of Natural Gases and Gas Technologies, Scientific and Research Institute of concrete and reinforces concrete, Scientific, Bashneft Research and Project Institute, Scientific and Research Institute of Energy Structures (RusHydro).

## Technical data

Color and gloss	gray, light gray, white matte
Dry film thickness, $\mu\text{m}$	40-70
Theoretical spreading rate of one-layer coating, $\text{g}/\text{m}^2$	100-180
Impact strength	50 cm, not less
Flexibility when folding	2 mm, not more than
Heat resistance in atmospheric conditions	150 °C
Adhesion (GOST 15140)	1 grade, not more than
Density, $\text{g}/\text{cm}^3$	1.40-1.70
Viscosity	thixotropic
Solids, %	
- by mass	75.0±4
- by volume	60.0±3
Drying time to 3 degree (GOST 19007) at (23±2)°C and relative air humidity (65±5)%, h	4, not more than

## Surface preparation

Priming coat shall be cleaned from dirt, dust, and degreased.

## Application

- mix thoroughly to homogenous condition before application;
- if required, dilute to working viscosity immediately before application.

Overlapping interval of primer by POLYTON-UR at (20±2)°C and relative air humidity (65±5)%:

- ZINOTAN – not less than 4 hours (as relative humidity decreases, holding time increases);
- ZINEP – not less than 4 hours;
- ZFES – not less than 6 hours.

It shall be applied at temperatures from minus 15 °C to plus 40 °C and relative air humidity from 30 to 98 % in plant and field conditions.

Application methods:

### **Airless spray**

Recommended thinner	without
Nozzle diameter	0.013"-0.021" (0.33-0.53 mm)
Pressure	10-15 MPa (100-150 bar)

### **Conventional (air) spray**

Recommended thinner	SOLV-UR® (TS 2319-032-12288779)
Quantity	up to 10 % by mass
Nozzle diameter	1.8-2.2 mm
Pressure	0.3-0.4 MPa (3-4 bar)

### **Brush/roller**

Recommended thinner	SOLV-UR®
Quantity	up to 10 % by mass

### **Equipment cleaning**

SOLV-UR®, petroleum solvent, thinners 646 or P-4

The rate of formation POLYTON-UR coating depends on the relative air humidity and the temperature; when controlling the overlapping interval, the climatic conditions variability should be considered.

Each subsequent layer of POLYTON-UR should be applied after the previous one has dried to "touch dry" (slight touch on the coating does not leave a trace and does not give a feeling of stickiness).

Minimum and maximum overlapping intervals by POLYTON-UR (UV) are given in technological instructions.

**Failure to comply with the recommendations of overlapping intervals may lead to the appearance of coating defects and decline of the interlayer adhesion.**

If the maximum overlapping interval is exceeded, it is necessary to make additional surface preparation to ensure adhesion of subsequent layers.

The optimal coating drying mode: at a temperature between 25 and 35 °C and relative air humidity between 50 and 65 % in chamber. Through dry time in these conditions – no more than 6 h.

In plant conditions, it is possible to apply POLYTON-UR with Accelerator of curing for polyurethane paints to decrease the drying time (by 1.5-2.5 times), at relative air humidity not less than 30 % (TU 2359-047-12288779).

## Storage and handling

POLYTON-UR is supplied in metal containers capacity of 20, 3 and 1 litre.

Storage and transportation conditions of POLYTON-UR according to GOST 9980.5 (at temperatures from minus 40 °C to plus 40 °C). The container with enamel shall be protected from atmospheric condensation and direct sunlight.

The shelf life in hermetically enclosed original container is 12 months starting with the manufacture date.

## Precautions

When working with POLYTON-UR, one shall observe the existing sectoral standard norms and requirements and safety measures as specified on the package label.

Personal protective equipment (goggles, face masks and respirators) shall be used, inhalation of thinners and contact of the composition or its components with skin, ocular mucosa, respiratory channels shall be avoided; use inside the premises is allowed only in case sufficient ventilation is provided.

The enamel is classified as a fire-hazardous material.

*The information is of general character, without consideration to the object specific nature and it is recommended to be read with the Operating Procedure. Use of materials for other purposes not specified here or in case other influencing factors are present shall be approved by the VMP Holding CJSC in writing. In case of absence of such approval the manufacturer is not held liable for the improper use of the material and the buyer falls from the right to present claims connected with the coating quality.*



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