

Description

ZINEP is a two-component zinc-rich polyamide cured epoxy primer with high content of non-volatile matter. According to the metal zinc mass content (more than 89 %) the coating meets the operational requirements SSPC Paint 20 (level 1, type II), can be considered as "cold" galvanizing.

Recommended use

Anticorrosive protection of steel structures operating under atmospheric conditions of all macroclimatic regions, atmosphere types and location categories as per GOST 15150. The coating is resistant to sea and fresh water, aqueous solutions of salts, to oil and oil products.

Due to the high content of zinc, ZINEP is recommended for the protection of objects operating in a highly corrosive industrial environment.

It is used as:

- protective primer in complex corrosion protection systems;
- single coat system in conditions of placement without exposure to direct sunlight.

Recommended for use:

- with ISOLEP-mio, POLYTON-UR (UV), POLYTON-UR, VINICOR-62 type A, ALUMOTAN top coats, as well as with other epoxy, polyurethane, vinyl chloride and copolymer-vinyl chloride coatings;
- with fire-proof coatings with the PLAMCOR® series.

Certificates, approvals

Certificate of state registration No. RU.66.01.40.015.E.000146.07.18 dated 16.07.2018.

Conformity certificates with fire protection coatings PLAMCOR-2, PLAMCOR-3.

Oil and Gas Industry: registers of JSC Gazprom, Rosneft, Lukoil.

Transport construction: STO-01393674-007-2022 Central Research Institute of Construction JSC; STO 12288779-001-2020 State Company Avtodor; accreditation of Russian Railways JSCO, standard technological regulations for the anticorrosive protection of metal superstructures of new railway bridges 12288779.02073.00160.

Industrial and civil construction: recommended to the application according to GOST 9.401, RD GM-02-18 Trest Gidromontazh, recommendations of NIKIMT-Atomsgroi JSC for use in nuclear power plants, MMC Norilsk Nickel.

Approvals: Lacquer Coating Research Institute, Khotkovo town; Institute for Corrosion Protection Dresden, (Germany), All-Russian Scientific Research Institute of Railway Transport, Central scientific Research Institute of Construction, Central Marine Research and Design Institute, Institute of Ecology and Evolution Problems RAS named after A.N. Severtsov (Russian-Vietnamese Research and Technology Center, Nyachang, SIC, Sochi, CIS, Severomorsk).

Technical data

Appearance and color of coating	Matt, gray, the shade is not standardized
Cross cut adhesion (GOST 31149), grades, not more than	0
Heat resistance in dry atmosphere	120 °C
Density of primer-enamel g/cm ³	2.80 – 3.00
Pot life at temperature (20±2)°C, h	12, not less than
Solids	
by volume, %	56 – 58
by mass, %	84 – 87
Viscosity	Thixotropic
Dry film thickness, μm	40 – 80
Wet film thickness of, μm	70 – 140
Drying time at a temperature of (20±2)°C, hours	
- to 3 degree (GOST 19007)	2
- "to turning over, handling"	11
Theoretical spreading rate of one-layer coating, g/m ²	195 – 390

Surface preparation

- degrease metal surface to 1 grade according to GOST 9.402;
 - perform abrasive blasting cleaning of scale, rust and traces of old paint to not less than 2 grade according to GOST 9.402 or Sa 2 1/2 ISO 8501-1 with a roughening of 30-50 µm (between segments 1 and 2. but lower of G comparator ISO 8503-2). Application on a smooth surface is not allowed;
 - remove dust.
- The primer should be applied no later than 6 hours after abrasive blasting.
Before applying subsequent layers, the coated surface must be clean from dirt, degreased, dust-free and dry.

Application

- mix the base to a homogeneous condition before application;
 - add a hardener to the primer base with constant stirring, mix thoroughly during 2-3 minutes to a homogeneous condition. The mixing ratio of base and hardener: by mass 100:5.5, by volume 5.4:1;
 - hold for at least 30 minutes before application and mix again to a homogeneous condition;
 - dilute to working viscosity, if necessary,
- For the organization of painting work, the decrease of the pot life with increasing temperature should be taken into account. Dependence of the pot life on the ambient temperature is given in the table:

Parameter name	Ambient temperature				
	0 °C	+10 °C	+20 °C	+30 °C	+40 °C
Pot life, hours	40	24	12	6	4

It is recommended to apply ZINEP at temperatures from 0 to plus 40 °C (allowed at temperature from minus 5 °C) and relative air humidity of not more than 85 %. The temperature of the surface to be painted must be above the dew point by at least 3 °C, but not above plus 40 °C. When painting, the temperature of the material should not be below plus 15 °C.

Apply 1-2 layers by airless, conventional (air) spray, brush/roller (striped painting).

Application procedures:

Airless spray

Recommended thinner	SOLV-EP (TS 20.30.22-106-12288779-2018), thinners 646, 647, 648
Quantity	up to 5 % by mass
Nozzle diameter	0.015" - 0.021" (0.38 - 0.53 mm)
Pressure	15 - 25 MPa (150 - 250 bar)

Conventional (air) spray

Recommended thinner	SOLV-EP, thinners 646, 647, 648
Quantity	up to 5 % by mass
Nozzle diameter	1.8 - 2.2 mm
Pressure	0.3 - 0.4 MPa (3 - 4 bar)

Brush/roller

Recommended thinner	SOLV-EP, thinners 646, 647, 648
Quantity	up to 5 % by mass

Equipment cleaning

SOLV-EP,
thinners 646, 647, 648

Drying of the coating is natural. When the temperature increases, the drying time shortens (data for the dry film thickness of 60-80 µm is given in the table):

Drying degree	Time, minutes (minutes), h (hours) at ambient temperature, °C						
	-5	0	+10	+20	+25	+30	+40
To overlapping (minimal)	36 h	24 h	12 h	4 h	3 h	2.5 h	1.5 h
To turning over, handling	6 d	3 d	24 h	11 h	8 h	6 h	1.5 h
To stackable	10 d	5 d	48 h	14 h	10 h	8 h	3 h

The hardening time is recommended as an approximate for practical painting. Hardening time depends on the surface temperature and ambient air, the dilution ratio of the material, the coating thickness, the efficiency of ventilation and the relative air humidity.

The drying time "to turning over, handling", "to stackable" depends also on the design features of metal structures (the number of support points, sling arrangements, metal structures fasteners for further transportation) and may differ from those indicated. It should be determined by test coloring for specific conditions.

The maximum overcoating interval is not more than 1 year. The holding time at a temperature of 20 °C before packing and shipping – at least 24 hours, before the operation in severe environments is not less than 7 days.

Storage and handling

ZINEP is supplied as the Base in 10 and 1 litre metal containers and the hardener in 3 and 0.25 litre metal containers.

Storage conditions – according to GOST 9980.5 (at air temperature from minus 40 to plus 40 °C). The material components shall be stored away from heat sources, the container shall be protected from direct sunlight (short-term impact, not more than 3 hours, is acceptable) and atmospheric condensation.

The shelf life of the components is 18 months starting with the date of manufacture.

Precautions

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

One shall use personal protective equipment (goggles, face masks and respirators) and avoid inhalation of solvents and contact of the composition substances with skin, eye mucosa, respiratory channels; use inside the premises is allowed only in case sufficient ventilation is provided.

It is classified as 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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