ISOLEP®-mastic

primer/finish

(TS 20.30.12-065-12288779-2017)

Quality management system is certified according to ISO 9001

Description

ISOLEP-mastic is a two-component polyamine cured modified epoxy primer. It is surface tolerant, high solids, high build coating, produced in two colors: grey and silver-grey (with aluminum pigments).

ISOLEP-mastic is recommended for painting new metal structures or in case of renovation surfaces with tightly adhered rust of thickness or old coatings GF(ГФ)-021, FL(ФЛ)-03K, VL(ВЛ)-023.

It can be applied and at sub zero temperatures.

Recommended use

Anticorrosion protection of metal and concrete structures operating under atmospheric conditions of all macroclimatic regions, atmosphere types and location categories as per GOST 15150, buried in soil.

It is authorized for use in the agricultural buildings and constructions including those with humid disinfection. Suitable for galvanized steel, products made of aluminum and its alloys.

ISOLEP-mastic of silver grey color may be recommended for anticorrosive protection of the outer surface of insulated heating piping with canal laying.

The coating is resistant to spillage of oil, other petroleum products and chemical reagents.

ISOLEP-mastic is used as:

- primer with POLYTON-UR (UV), POLYTON-UR, VINICOR-62 topcoats and other epoxy, vinyl-epoxy and polyurethane coatings;
- single coat system.

It can be applied as mid coat with ISOLEP-pro primer for concrete surface.

Certificates, Approvals

State registration certificate No. RU.66.01.40.015.E.000129.07.18 dd. 06.07.2018.

Conformity certificates with fire protection coatings PLAMCOR.

Transport construction: Central Scientific and Research Institute of Transport Construction Standart (СТО АО «ЦНИИТС»), GC Avtodor Standart, standard process procedure 12288779.02073.00062 to paint bridges («Russian Railways»).

Oil and gas Industry: registers of JSC Transneft, Gazprom, Rosneft, Lukoil, Irkutskaya NC, Surgutneftegas, Gaspromneft.

Industrial and civil construction: GOST 9.401-2018, Guidance document Trust Gidromontazh (РД ГМ-02-18), MMC Norilsk Nickel.

Expert statement by the NPO «LKP» with OMZ «Victoria», VNIIGAZ, JSC «TSNIIS», «Pamfilov Academy of Public Utilities», OJSC «Fundamentproekt», Institute of Applied Chemistry and Certification Frishberg.

Technical data

Appearance	homogeneous	
Color	grey	silver-grey
Thickness of one coat, μm	100*-250	150-300
Theoretical spreading rate, g/m^2	190-475	315-630
Adhesion of coating thickness not exceeding 250 μm (GOST 31149, cross-cut test method)	1 adhesion grade, max.	
Adhesion of coating thickness exceeding 250 μm X-cut test method		
ASTM D-3359	4A, min.	
ISO 16276	1 adhesion grade, max.	
Heat resistance in dry atmosphere	120 °C (short-term)	150 °C
Coating class	VI	
Density, g/cm^3	1.30-1.50	1.20-1.40
Viscosity	thixotropic	
Solids by volume, %	72	65

Pot life at a temperature (20±0.5)°C, h	2, not less than	
Coverage, g/m^2, not less than	240	120
Drying time at a temperature (20±2)°C , h		
- tack free	4	
- degree 1 (GOST 19007)	4	
- degree 3 (GOST 19007)	6	

* for applying ISOLEP-mastic with a thinner layer (up to 60 μm) additional dilution with SOLV-EP up to 10 % by mass may be required

Surface preparation

Steel:

- degrease metal surface till 1 grade according to GOST 9.402;
- abrasive blasting to remove scale, rust and old coatings to 2 grade (GOST 9.402) or to Sa 2 ½ or Sa 2 (ISO 8501),

Hand and power tool cleaning of rust up to grade 3 or 4 GOST 9.402 (St 3 or St 2 ISO 8501-1) is allowed in case of repair painting; the thickness of the remnants of tightly adhered rust layers should not exceed 50 μm. For old coatings – to P St 3 or P St 2 (ISO 8501-2). After cleaning thickness of the remaining coating shall not exceed 200 μm and adhesion shall be at least 2 MPa as per ISO 4624 or not more than 2 grade (GOST R 31149);

- remove dust.

Galvanized steel:

- degrease metal surface till reaching 1 grade according to GOST 9.402;
- roughening (if required);
- remove dust.

Concrete:

Dry, clean and intact ISOLEP-pro primer coating must not be glossy; if it is necessary perform abrasive blasting before application.

Application

- Prior to use mix the base until smooth;
- While mixing constantly add a curing agent (then it is ready for use).

Base and curing agent mixing ratio of ISOLEP-mastic:

- for grey color by mass 100:16.3, by volume 4.3:1;
- for silver-grey color by mass 100:14.3, by volume 5.2:1

It is recommended to apply ISOLEP-mastic in the field and workshop environment at ambient air temperature from minus 10 to plus 40 °C and relative humidity not more than 85 %.

Application methods:

Airless spray	
Recommended thinner	SOLV-EP (TS 20.30.22-106-12288779-2018)
Quantity	up to 10 % by mass
Pressure	min. 22 MPa (220 bar)
Nozzle diameter	0.017”-0.021” (0.43-0.53mm)
Conventional (air) spray	
Recommended thinner	SOLV-EP
Quantity	up to 10 % by mass
Pressure	0.3-0.4 MPa (3-4 bar)
Nozzle diameter	1.8-2.2 mm
Brush/roller	
Recommended thinner	SOLV-EP
Quantity	from 3 up to 5 % by mass
Equipment cleaning	SOLV-EP Thinners 646, P-4, 647, 649

When painting at ambient air temperature below minus 10 °C it is recommended to increase spray pressure for ISOLEP-mastic silver-grey.

The process provides for natural drying.

Stages of drying	Time at ambient temperature, °C									
	-10	-5	0	+5	+10	+15	+20	+25	+30	+40
To 1 degree (GOST 19007), h	46	36	28	20	14	10	4	3,4	2,5	1
To 3 degree (GOST 19007), h	78	57	40	27	18	11	6	4,5	4	3
Min overcoating interval, h	88	67	45	35	23	13	6	6	5	4
Through dry, days	68	45	30	14	12	9	7	6	5	3
The specified hardening time is recommended to be taken as indicative of practical coloring. The hardening time depends on the surface temperature and ambient air, the degree of dilution of the material, the thickness of the coating, the efficiency of ventilation and the relative humidity of the air.										

The minimum and maximum overlapping interval of top coats at temperature from 20 to 25 °C is shown in the below table:

Top coat	Min. time	Max. time
Grey color		
POLYTON-UR (UV)	6 h	6 months
Silver-grey color		
POLYTON-UR (UV)	6 h	3 months
VINICOR-62	7 h	
POLYTON-UR	7 h	6 months

When the maximum overlap interval is exceeded additional measures to ensure adhesion may be required.

ISOLEP-mastic prior to application of top coats must be dry, clean and intact. Preparation (if required):

- Remove dirt, oil and grease;
- wash with fresh high-pressure water;
- dry the surface.

Storage and handling

ISOLEP-mastic is supplied as the base in 20 and 1 litre metal containers and the curing agent in 5 and 0.25 litre metal containers.

Storage conditions of the base and curing agent - in accordance with GOST 9980.5 (at ambient air temperature from minus 40 to plus 40 °C). In storage the package shall be protected from lasting direct sunlight and atmospheric condensation. It is allowed to store the package with ISOLEP-mastic components under direct sunlight, however not more than 3 hours.

The shelf life of the components is 24 months starting with the date of manufacture.

Precautions

When working with the ISOLEP-mastic 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.

ISOLEP-mastic is classified as fire-hazardous material.

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