

# ISOLEP<sup>®</sup>-oil 350 AS

composition

(TS 20.30.12-081-12288779-2017)



## Description

A two-component amine cured epoxy composition.

## Recommended use

It is used as an independent coating for anticorrosive protection of the internal surface of steel tanks, reservoirs, tank cisterns, industrial pipelines contacting with light oil products (gasoline, aviation fuel, diesel fuel, heavy and light gas oils, light naphtha, gas condensate distillation apparatus, hydrocarbon thinners – white spirit, solvent, oil thinner), liquefied natural gas.

It has resistance to sea water, technological lubricating and cooling liquids and cleaning liquids.

The coating is highly abrasion resistant. Contains an additive agent to increase the electrical conductivity, which allows the coating not to build a static charge. Recommended operating temperature in liquid fluids is up to plus 60 °C (for a short time it is allowed up to plus 75 °C, it can stand steaming operation).

## Certificates, Approvals

Certificate of state registration No. RU.66.01.40.015.E.000110.08.17 dated 24.08.2017.

Approved by testing center Transneft R&D, LLC (as reinforced type coating with predicted service life of 20 years); FGUP GosNII GA.

**Oil and gas Industry:** complies with company regulations Gazprom, Transneft, Rosneft, Lukoil, Irkutsk Oil Company, Surgutneftegaz, Gazpromneft.

## Technical data

	Coating
Color of coating*	black, grey
External appearance	glossy
Dry film thickness, µm	100-170
Volume resistivity, Ohm*m, not more than	10 <sup>9</sup>
	Composition
Density of composition, g/cm <sup>3</sup>	1.15-1.25
Pot life at temperature (20±2)° C, h	2, not less then
Drying time (GOST 19007) at a temperature (23±2)°C, h:	
- to 1 degree	5
- to 3 degree	8
Wet film thickness, µm	150-260
Theoretical spreading rate of one-layer coating, g/m <sup>2</sup>	210-360
Solids	
- by volume, % volume	57
- by mass, % mass	65-70

\* At the facilities of Transneft, the color of the first layer is gray, the color of the second layer is black

## Surface preparation

- degrease metal surface to 1 grade according to GOST 9.402;
- perform abrasive blasting to remove scale and corrosion to grade not less than Sa 2 1/2 according to ISO 8501-1 (2 according to GOST 9.402). Surface profile is sharp, angular with a roughness of 85-115 µm (segment 3G according to ISO 8503-2);
- remove dust.

The material should be coating no later than 6 hours after abrasive blasting. Before application of the second layer, the surface must be cleared from dirt, degreased, dust-free and dry.

## Application

Mix the base of material with stirrer to a homogeneous condition before application; with constant stirring, add the hardener to the base, mix thoroughly for 1-3 minutes to a homogeneous condition.

The mixing ratio of base and hardener: by mass 6.5:1, by volume 5:1

The pot life of ISOLEP-350 AS (after mixing the components) at ambient temperature (20±2)°C is not less than 2 hours. For the organization of painting, the decrease of the pot life with increasing temperature should be taken into account, the dependence is given in the table:

Parameter name	Ambient temperature, °C		
	+15 °C	+20 °C	+30 °C
Pot life	3.5 h	2 h	1 h

ISOLEP-oil 350 AS is recommended to be used when application and hardening can take place at ambient temperature of plus 5 to plus 40 °C and relative humidity not more than 80 %. 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.

During the coating the temperature of the material must be not less than plus 15 °C.

It is recommended to add the thinner at an air temperature of plus 30 to plus 40 °C to reduce the likelihood of a "dry spray" effect and increase the pot life of the material. The addition of an excessive amount of thinner leads to runs and an increase in the curing time of the coating.

Recommended application methods

#### **Airless spray**

Recommended thinner	SOLV-EP (TS 20.30.22-106-12288779-2018)
Quantity	Not more than 5 % by mass
Pressure	15 - 25 MPa
Nozzle	0.015"-0.021" (0.38-0.53 mm)

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

Recommended thinner	SOLV-EP
Quantity	not more than 5 % 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	not more than 5% by mass

#### **Equipment cleaning**

SOLV-EP, thinners 646, 647, 649

Recommended two-layer application with a total thickness of 200-340 µm.

Drying of the coating is natural. As the temperature increases, the drying time shortens. The minimum and maximum overlap interval of ISOLEP-oil 350 AS coating before the subsequent layer, and the time for its full hardening (drying for service) are given in the table (for a dry film thickness of 150 µm).

Drying degree	Time, h (hours), d (days) at ambient temperature, °C								
	0	+5	+10	+15	+20	+25	+30	+35	+40
To 1 degree (GOST 19007)	47 h	35 h	22 h	12 h	5 h	3 h	2 h	1.5 h	1.5 h
The minimum overlap interval, To 3 degree (GOST 19007)	53 h	40 h	28 h	17 h	8 h	5 h	3.5 h	2.5 h	2 h
The maximum overlap interval	14 d	10 d	7 d	5 d	4 d	4 d	3 d	2.5 h	2 d
Full hardening	25 d	20 d	15 d	12 d	7 d	5.5 d	4 d	3 h	2 d

The specified hardening time is recommended to be taken as indicative of practical coloring. The hardening time depends on the temperature of surface 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.

If the maximum overlap time is exceeded, it is necessary to carry out an additional surface treatment for roughening (light sweeping).

## **Storage and handling**

The composition is delivered in packages: base and hardener packed in metal containers.

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

The shelf life of the base and hardener of composition is 24 months starting with the manufacture date.

## **Precautions**

When working with the composition, the existing sectoral standard norms and requirements and safety measures as specified on the package label shall be observed. Personal protective equipment (goggles, face masks and respirators) shall be used, and inhalation of thinners and contact of the material and 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 material and its components (base and hardener) are fire-hazardous!

The hardened coating is not harmful to human health.

*The information is of general character, without consideration to the object specific nature and it is recommended to be read with the Application Guide. Use of materials for other purposes 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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