

# Polihim Research and Production Enterprise (OOO)

Suite 13, No. 20,  
Marshal Zhukov Ave., 198302,  
Website: [www.polihimnpp.ru](http://www.polihimnpp.ru)



e-mail: [info@polihimnpp.ru](mailto:info@polihimnpp.ru)  
Tel.: (812) 715-05-84  
Tel./Fax: (812) 374-72-06

## POLITREN EK

### WATER-SOLUBLE ANTICORROSIVE PRESERVATIVE LIQUID

#### DESCRIPTION

**Politren EK** is a concentrate of water-soluble liquid based on hydrocarbons, oils, anti-corrosion additives and emulsifiers. Does not contain harmful nitrites. The advantages of a water-soluble preservation liquid compared to oil are:

- low thickness of protective film (2÷20 microns) whereas the oil film thickness is 80÷85 microns when protected with an oil liquid (e.g. K-17);
- low thickness of the protective film makes it possible to obtain a high quality weld without removing the preservation film;
- good displacement of water and non-flammability of the water-based fluid;

#### AREA OF APPLICATION

**Politren EK** is used as a preservation liquid for long-term corrosion protection of carbon and alloy steels and non-ferrous metals. Effective for long-term protection of inner surfaces of ship pipework. Before applying, dilute Politren EK with water. In this case, an emulsion is obtained, which has an increased service life, low foaming, and high emulsion stability.

#### PHYSICAL AND CHEMICAL PROPERTIES

Parameter	Politren EK
Appearance	homogeneous white to brownish liquid
Effective viscosity, 20 <sup>0</sup> C, Pa-s, not less than	5
Mass fraction of non-volatile residue, %, not less than	35
Density, 20 <sup>0</sup> C, g/cm <sup>3</sup> , not less than	0.85
<b><u>10% water emulsion:</u></b>	
Emulsion stability, not less than, %	80
pH	8-10

## USE

**Politren EK** is supplied as a concentrate and must be diluted with water before use. When diluting, it is sufficient to use a conventional stirrer and stir the product for 5-15 minutes.

The dilution rate shall be determined by the required reliability of protection according to GOST and the desired duration of protection. For example, to protect carbon steel in unheated areas for at least:

- 1 month, the water-dilution rate is 1:9
- 0.5-1 year - the water-dilution rate is 1: (0.8-1)
- 2 years - w/o dilution

For example: If the dilution rate is 1:0.8 (water), the lubricant film thickness is about 12  $\mu\text{m}$ .

The emulsion is applied to the protected surface by spraying (conventional paint sprayer), dipping, dousing, or using a brush. Emulsion consumption is approximately  $40\div 100\text{ g/m}^2$ . To increase the protective ability after applying the emulsion to the surface, it shall be partially or completely dried, and the water contained in the emulsion shall be removed. To do this, the protected parts are usually kept outdoors. To speed up drying, you can blow the surface with air, raise the temperature of both product and air, or only air.

## SAFETY REQUIREMENTS, TOXICOLOGICAL PROPERTIES AND ENVIRONMENTAL PROTECTION

In terms of toxicological properties, Politren EK is classified as a low-hazard substance (lowest Class IV hazard according to GOST 12.1.007-76).

When using Politren EK the main components polluting the air in the working area are: hydrocarbon and mineral oil aerosol (MPC is  $5\text{ mg/m}^3$ ) and triethanolamine aerosol (MPC is  $5\text{ mg/m}^3$ ).

The premises where Politren EK is used shall be equipped with continuously operating supply and exhaust mechanical ventilation.

Within the production facilities, the air shall be monitored subject to the shop-floor air monitoring schedule agreed with the local public health authorities.

The personnel involved in handling Politren EK shall wear protective clothing and use personal protective equipment in accordance with standard industry norms.

When manufacturing and/or using Politren EK emulsions, the requirements of "Sanitary rules for working with cooling lubricants and tool lubrication", No. 3935-85 dated 09.29.1985, shall be complied with.

Use a clean cloth to remove Politren EK from hands or face; wash the remaining product away with plenty of water or wash away with warm soapy water.

In case of ingress of the product onto working parts of the machinery, the floor of the machinery area shall be cleaned with rags, and the remaining product shall be washed away with water.

For the disposal of the waste liquid, maximum permissible norms for the most toxic component should be referred to. The Politren EK maximum allowable concentration in water bodies (MAC<sub>w</sub>), determined by the most toxic water-insoluble component - oil - is  $0.4\text{ mg/l}$ , determined by the most toxic water-soluble component - triethanolamine - is  $1.4\text{ mg/l}$ ; maximum concentration of Politren EK - determined by by triethanolamine supplied to bio-treatment (MCB) is  $5\text{ mg/l}$ .