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POLITREN E-45

EXPANDER OIL DESCRIPTION

Politren E-45 is an expander high-viscosity oil based on oils, emulsifiers, anti-wear, anticorrosion and other additives; it does not contain harmful nitrites, amides, nitrates, organic chlorine compounds, or zinc compounds.

AREA OF APPLICATION

Politren E-45 expander oil is used to lubricate tools during calibration of large diameter pipes on the expanders of SMS MEEP, Mannesmann-Demag and other types; it can also be used as a lubricant for heavy operations of cold metal forming, and cold rolling.

PHYSICAL AND CHEMICAL PROPERTIES

Parameter	POLITREN E-45
Appearance	Brown, sluggish
Odor	Not irritating
Kinematic viscosity @40°C, mm ² /sec	450
Density @20°C	0.98 g/cm ³
Flash point, °C	higher than 100
Solidification point, °C	- 22
Emulsifying ability	spontaneously with water in any ratio
Emulsion stability, %	not less than 95
pH 5% in water	approx. 8.0
Rinsability	100%
Anticorrosion properties - steel	corrosion free
Foaminess	None
Cleaning of emulsion by AWAS system	per 1 cycle removes 0.3-0.4% of oil from water
Welding load, Pw	2764N
Critical load, Pc	1381N
Load wear index, lb	590N
Wear scar diameter, Dw	0.5

PERFORMANCE CHARACTERISTICS

- high anti-wear properties;
- extremely high stability of lubricant film under compressive load;
- high adhesiveness;
- high wear protection of tools;
- spontaneous emulsification in water;
- high water removability;
- high anti-corrosion properties;
- high usage and ecological properties.

USE

Politren E-45 expander oil is supplied and used in the form of a concentrate. It can be used as a diluted emulsion with a concentration of 8-10% for broaching, and 2-3% for washing.

Before adding Politren E-45 the machines and cooling lubricant supply lines must be washed and disinfected from the previously used lubricants. It is best to do this with the special detergent-disinfectant Politren MD.

SAFETY REQUIREMENTS, TOXICOLOGICAL PROPERTIES AND ENVIRONMENTAL PROTECTION

Politren E-45 concentrate is a flammable liquid with a flash point of not over 200⁰C in an open cup.

In terms of toxicological properties Politren E-45 is classified as a low-hazard substance (lowest Class IV hazard as per GOST 12.1.007-76).

Politren E-45 concentrate and/or emulsion does not penetrate intact skin, does not possess a sensitizing effect, does not irritate the skin, or the mucous membranes of the eyes or upper respiratory tract; and it is not an intense source of air pollution of the working area.

When using Politren E-45, the main component polluting the air in the working area is oil aerosol (MAC is 5 mg/m³) The premises where Politren E-45 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 E-45 shall wear protective clothing and use personal protective equipment in accordance with standard industry norms.

When manufacturing and/or using Politren E-45 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 clean soft cloth to remove Politren E-45 from hands or face; rinse the remaining product with plenty of water or wash with warm water. On contact with the mucous membrane of the eyes, rinse the eye thoroughly with warm water and apply sulfacetamide drops (sulfatsil-sodium).

In case of ingress of the oil onto working parts of the machinery, the floor of the machinery area shall be cleaned with rags, and the remaining product shall be washed with water. For the disposal of waste oil emulsion, maximum permissible norms for the most toxic component should be referred to. The Politren E-45 maximum permissible concentration in water bodies (MPCw), determined for the most toxic insoluble component of oil in water, is 0.4 mg/l, and MAC of the product supplied to bio-treatment (MCB) is 5 mg/l.