Gazpromneft Cutfluid Est

Gazpromneft Cutfluid Est – biostable, semi-synthetic, water-miscible coolant. Contains an effective additive package, esters and special mineral oil. Developed for the toughest metalworking operations on heat-resistant steels, titanium, etc. Gazpromneft Cutfluid Est ensures maximum cutting tool life under the harshest conditions. The highest microemulsion stability and resistance to bio-damage maximize the coolant change interval. The product is safe for the environment and personnel. Does not contain chlorine compounds, nitrites, secondary amines.

Application

Gazpromneft Cutfluid Est allows machining: all types of steels, non-ferrous metals, deformable and foundry aluminium alloys, titanium alloys, heat-resistant (aviation) alloys. It is used in operations: abrasive, blade machining of any complexity: grinding, milling, drilling, reaming, tapping, turning, deep drilling with gun drills, broaching, etc.

Advantages

- High content of esters
- Increased durability of cutting tools
- Cost-effective to use
- Easily mixed with water
- Long service life of emulsion even with long downtimes
- Excellent microemulsion stability
- Use with water of a wide range of hardness
- Environmentally friendly product

Recommended concentrations of operating emulsion by operations

Operations	grinding	drilling, turning, milling	screw cutting, reaming
Operating emulsion concentration , %	3-5	5-7	6-8

Typical characteristics

Properties	Method	Gazpromneft Cutfluid Est
Appearance	Visually	Homogeneous transparent liquid from yellow to brown in color. Weak opalescence is allowed
Kinematic viscosity at 40 °C, mm^2/s	GOST 33	62,4
Density at 20°C, kg/m^3	GOST 3900	964
pH in 5% water emulsion	GOST 6243 clause 4	9,2
Refraction factor	Manufacturer data	1,1

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The above data are typical for the products currently available. Due to ongoing research and development, the information contained in the document is subject to change. Information on the safe use of the product is contained in the Safety Data Sheet. More detailed information can be obtained from the company's technical specialists. E-mail: Techservice@gazprom-neft.ru.
06/2024

Recommendations for storage, transportation, preparation and control of cutting fluids

The product is supplied to the consumer in the form of concentrate. It is recommended to store and transport at temperature from +5 to 35°C. The coolant should be stored in closed containers protected from direct sunlight and penetration of atmospheric precipitations and contaminants.

Preparation of working emulsion of cutting fluid is carried out by gradual addition and mixing of the calculated amount of concentrate into water (follow the sequence). For high-quality preparation of the working emulsion it is recommended to use special mixers (e.g. proportional dosing devices) when preparing the emulsion, use cool tap water. The temperature of water and concentrate should be in the range of +10°C...+30°C. If the temperature of the concentrate is lower than this, the viscosity will be higher and it will be more difficult to mix the components. Hot water should not be used, as the emulsion stability is impaired when the temperature rises.

Recommendations for adjusting the concentration of the operating emulsion

Formulas for calculating the concentration adjustment
(ω - concentration per cent, V – volume in liters)

Increased concentration is required

$$V_{emulsion\ added} = \frac{V_{emulsion\ poured}(\omega_{\ required} - \omega_{current})}{\omega_{emulsion\ added} - \omega_{\ required}}$$

Decreased concentration required

$$V_{emulsion\ added} = \frac{V_{emulsion\ poured}(\omega_{current} - \omega_{\ required})}{\omega_{required} - \omega_{emulsion\ added}}$$

Gazpromneft-Lubricants Ltd. recommends using emulsions with 12% concentration to increase the concentration of working emulsion, and it is recommended to use 1% emulsion to decrease the concentration of working emulsion.

Gazpromneft-Lubricants Ltd. does not recommend adding water in its purest form to decrease the concentration of the working emulsion, as in this case problems with the stability of the working emulsion may occur, which will negatively affect the processing of parts and equipment.

The company's management system is certified in accordance with the international standards

ISO 9001 ISO 14001 ISO 45001

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