

Mobil Prosol NT Series

Extra High Performance Emulsifiable Hot Rolling Oils

Product Description

Mobil Prosol NT 68 and NT 70 are extra high performance, emulsifiable rolling oils. Prosol NT 68 and NT 70 are based on high quality solvent refined mineral oils blended with specially selected additives, which are stable at high rolling temperatures. These products form a milky-white oil-in-water emulsion when mixed with water. Their formulations are precisely balanced to provide optimum rolling performance and excellent surface finish while minimizing oil consumption per rolled ton.

Features & Benefits

Mobil Prosol NT Series emulsifiable hot rolling oils are engineered to deliver improved rolling performance in high production and demanding applications. These roll oils help to increase production efficiency, reduce costs and increase profits. The potential features and potential benefits include the following:

| Features | Advantages and Potential Benefits |
|---|---|
| Satisfies a broad range of applications | Increases mill flexibility and reduces the number of roll oils needed |
| Excellent stability and resistance to breakdown with proper maintenance | Extends the service life of the roll oil |
| Good corrosion protection | Improves the quality of the finished product |
| High performance lubricity package to achieve optimum mill results | Permits higher reduction ratios and faster rolling speeds |
| Good wetting ability | Improves cooling capability and surface finish quality |
| High lubricity levels | Lowers rolling force and reduces power consumption |
| Ready separation of fines and tramp oil from the emulsion | Helps minimize stains |
| Controlled emulsion stability even in hard water | Extends emulsion life and optimizes production |
| Readily re-emulsifies in the bulk emulsion after water evaporation | Extends emulsion life and increases emulsion consistency |

Applications

Mobil Prosol NT Series deliver excellent operational performance in a broad range of applications including:

Mobil Prosol NT 70 is a general purpose roll oil and is used in metal forming and cutting (operations such as:

- Rolling of copper, copper alloys and mild steel
- Hydroforming of copper and brass
- Grinding of stainless steel strips using belt grinders
- Metal cutting (milling, turning, drilling) of steel, copper and aluminum
- Emulsion concentration in water depends on operation severity, but is usually in the range of 5 to 10% by volume.

ExxonMobil Lubricants & Specialties

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Mobil Prosol NT 68 is highly recommended for hot rolling aluminum and aluminum alloys involving:

- Breakdown reversible 2-high / 4-high mills, finishing tandem mills and on combination mills
- Tube mills and continuous casting operations for aluminum wire and strip rolling
- Emulsion strength varies between 3 to 6% by volume depending on targeted surface finish, rolling speed and reduction severity

Application Guidelines:

- Always add the oil concentrate to the water phase and not vice versa
- Mixing temperatures are not critical, but for best results the neat oil and water should be at room temperature between 15 and 25°C
- Demineralized water is recommended for daily top-up for maximum charge life and excellent surface finish

Typical Properties

| Mobil Prosol NT | | |
|--|---------------|---------------|
| Grade | NT 68 | NT 70 |
| Neat Oil Properties | | |
| Appearance, Visual | Clear & Brown | Clear & Brown |
| Kinematic Viscosity, ASTM D 445 | | |
| mm²/s @ 40°C | 60.5 | 42 |
| Density @15 °C kg/mm³, ASTM D 4052 | 0.923 | 0.894 |
| Pour Point, °C, ASTM D 97 | -24 | -15 |
| Flash Point, °C, ASTM D 92 | 208 | >180 |
| Sulphated Ash, mass %, ISO 3897 | 0.43 | 0.05 |
| Total Acid No, mg KOH/gm, ASTM D664 | 11.6 | |
| Neutralization Number, mgKOH/g, ISO 6618 | | 4 |
| Saponification Number, mgKOH/g, ISO 6293 | 37.5 | 25 |
| Emulsion | | |
| Appearance, Visual | Milky-white | Milky-white |
| pH-value, 6% distilled, XOM method | 8.6 | 7.8 |

Health & Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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