

# RELIASOL E-P(N)

## Emulsion Type Cutting Fluid for Heavy Cutting

**RELIASOL E-P(N)** is an emulsion-type cutting fluid for heavy cutting that contains active sulfur-based extreme pressure agents and special lubricants. It does not contain phosphorus and chlorine type extreme pressure agents. **RELIASOL E-P(N)** has high processing performance and is excellent in rust prevention, decay resistance, washability and penetrating ability. **RELIASOL E-P(N)** does not contain candidate chemical substances subject to the Poisonous and Deleterious Substances Control Law, and is considered for its effects on the human body.

### ● Special Features

#### 1. Excellent lubricity and good machining performance

**RELIASOL E-P(N)** has superior cutting performance due to its combination of active sulfur-based extreme pressure agents and special lubricants.

#### 2. Superior in rust prevention characteristics

**RELIASOL E-P(N)** is formulated with high performance anti-rust additives, because it is aimed for the machining of ferrous materials such as cast iron.

#### 3. Superior decay resistance

**RELIASOL E-P(N)** uses components with excellent decay resistance and contains antibacterial substances, so it can extend the life of liquid.

#### 4. Excellent washability and penetrating ability

#### 5. High human safety

**RELIASOL E-P(N)** is a product that does not contain candidate chemical substances subject to the Poisonous and Deleterious Substances Control Law and takes into consideration the effects on the human body.

### ● Applications

**RELIASOL E-P(N)** is suitable for various machining of ferrous materials including cast iron. **RELIASOL E-P(N)** is suitable for machining and heavy cutting of difficult-to-cut materials including stainless steel.

### ● Dilution Rate During Use

Cutting of ferrous materials: 10 to 30 times  
Gun drilling, broaching : 5 to 10 times

The above dilution rates are based on the assumption of standard operating conditions. They should be adjusted depending on the machining conditions and amount of processing.

### ● Containers

200-liter drum and 20-liter can

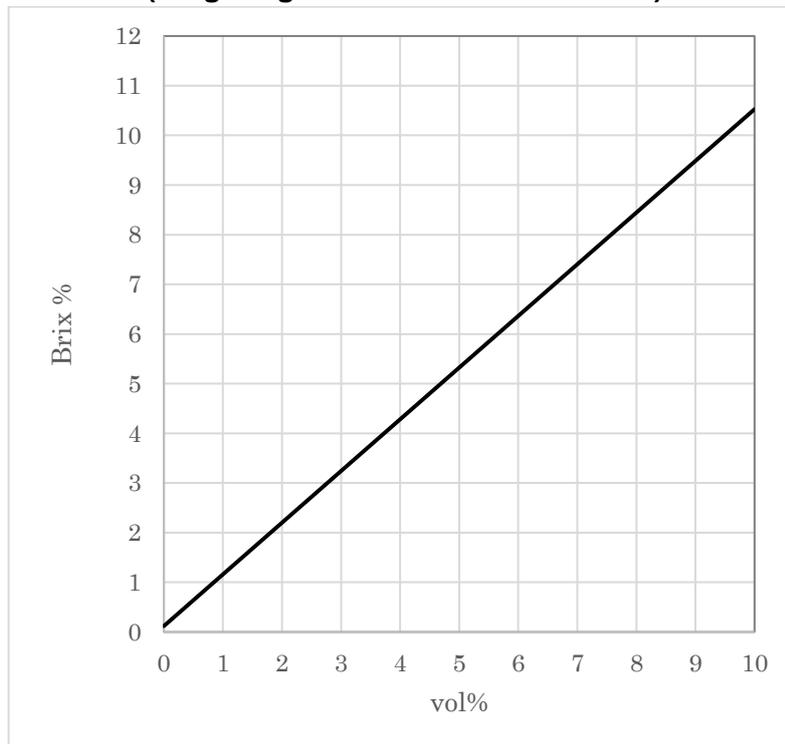
● **Typical Properties of RELIASOL E-P(N)**

Appearance (original fluid)	Dark green
(diluted fluid)	Pale green white emulsion
Density (15°C), g/cm <sup>3</sup>	0.990
Surface tension* (25°C), mN/m	34.6
pH *	9.3
Anticorrosion test (RT, 48h)*	
Steel sheet	No discoloration
Foaming* (24°C), ml	0
Emulsifying stability* (RT, 24°C)	
Distilled water, ml oil	0
Distilled water, ml creamy	0
Hard water, ml oil	0
Hard water, ml creamy	0

\*Measured with 10x diluted fluid

Note: The typical properties may be changed without notice. (January 2023)

**Concentration Conversion Graph for RELIASOL E-P(N)**  
(Atago Digital Refractometer PR-101)





## Handling Precautions

▼ Follow these precautions when handling this product.

<b>Composition :</b>	Water-soluble processing oil Mixture(Base oil(s), Additives)
<b>Hazard pictograms:</b>	
<b>Signal word:</b>	Danger
<b>Hazard Statement:</b>	Causes skin irritation Causes serious eye damage May cause an allergic skin reaction Harmful to aquatic life Toxic to aquatic life with long lasting effects
<b>Precautionary Statements:</b>	<ul style="list-style-type: none"><li>• Do not handle until all safety precautions have been read and understood.</li><li>• Wear protective gloves/protective clothing/eye protection/face protection.</li><li>• Do not allow the eyes to become exposed to the product. Do not swallow the product.</li><li>• Avoid release to the environment.</li><li>• Contaminated work clothing should not be allowed out of the workplace.</li><li>• Avoid breathing dust/fume/gas/mist/vapours/spray.</li><li>• Wash hands thoroughly after handling.</li><li>• Do not eat, drink or smoke when using this product.</li></ul>
<b>Response</b>	<ul style="list-style-type: none"><li>• IF SWALLOWED: Immediately call a POISON CENTER/doctor.</li><li>• IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li><li>• If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician.</li><li>• IF ON SKIN: Wash with plenty of soap and water.</li><li>• If skin irritation or a rash occurs: Get medical advice/attention.</li><li>• IF IN EYES: Rinse cautiously with water for several minutes.</li><li>• Remove contact lenses, if present and easy to do. Continue rinsing.</li><li>• Collect spillage.</li><li>• Take off contaminated clothing and wash it before reuse.</li></ul>
<b>Storage</b>	<ul style="list-style-type: none"><li>• The product must be stored in a cool, well-ventilated location where it will not be exposed to direct sunlight.</li><li>• Containers that have been opened must be tightly sealed.</li></ul>
<b>Disposal</b>	<ul style="list-style-type: none"><li>• Dispose of contents/container in accordance with local/regional/national/international regulations.</li><li>• If there are any doubts about proper methods of handling the product, contact the point of purchase before proceeding with usage.</li></ul>