

RELIASOL E-NA

Emulsion Type Cutting Fluid for General Purpose

RELIASOL E-NA is an emulsion type cutting fluid for general use that is superior in lubricity, rust prevention characteristics, anti-foaming property and decay resistance. **RELIASOL E-NA** 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. Also, it does not contain sulfur, phosphorus and chlorine type extreme pressure agents. **RELIASOL E-NA** is a high performance fluid suitable for metalworking of a wide range of materials. It corresponds to JIS K2241 Type A1, No. 2.

● Special Features

1. Excellent lubricity and good machining performance

Because **RELIASOL E-NA** uses synthetic lubricant, it has superior cutting performance.

2. Superior in rust prevention characteristics

RELIASOL E-NA is formulated with high performance anti-rust additives, because it is aimed for the machining of ferrous materials such as cast iron. Therefore, **RELIASOL E-NA** will prevent browning of liquid due to rust in case of machining cast iron.

3. Reduction of dirt around the machine

RELIASOL E-NA can reduce the adhesion and the deposition of viscous substances on equipment and machinery.

4. Superior decay resistance

RELIASOL E-NA can maintain decay resistance for a long term and extends the life of fluid compared with conventional emulsion type cutting fluid, because novel biostatic technology is adopted.

5. High human safety

RELIASOL E-NA 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-NA is suitable for lathe turning, drilling, reaming, end milling, etc. of ferrous materials (carbon steel and cast iron) and aluminum alloys.

● Dilution Rate During Use

Cutting of ferrous materials: 10 to 30 times

Cutting of aluminum materials: 20 to 30 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

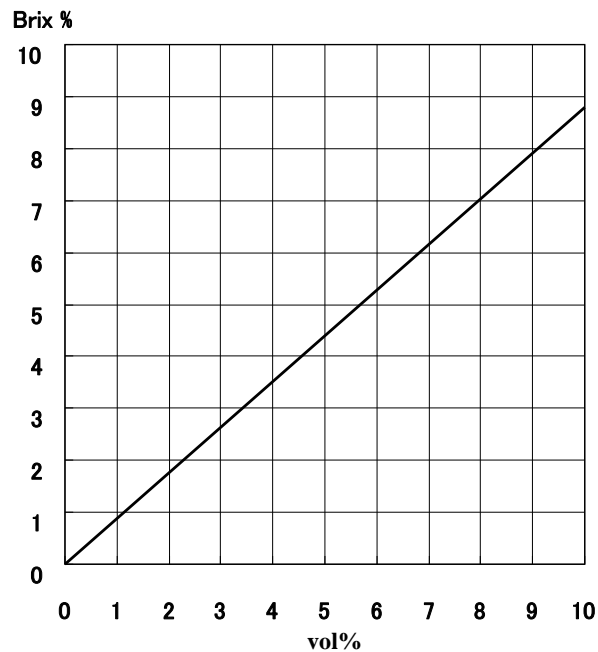
● Typical Properties of RELIASOL E-NA

Appearance (original fluid)	Yellow
(diluted fluid)	White emulsion
Density (15°C), g/cm ³	0.926
Surface tension* (25°C), mN/m	24.6
pH *	9.5
Anticorrosion test (RT, 48h)*	
Steel sheet	No discoloration
Aluminum sheet	No discoloration
Copper 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-NA
(Atago Digital Refractometer PR-101)**





Handling Precautions

▼ Follow these precautions when handling this product.

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