

DAPHNE ALPHACOOOL TS

~FIPG test pass level and Improving Manufacturing Conditions~

The speed and efficiency of machining tools have been steadily advancing every year, increasing the demands for more high performance coolants. The required performances of an efficient and high-speed coolant are summarized as follows:

1. Idemitsu's proprietary emulsion technology uses special surfactants to heighten emulsion stability.
2. Along with additives with high anti-bacterial property to improve resistance to rot to considerably extend the coolant's service life.
3. Since it suppresses fume occurrence and has high re-emulsifiability, this product also produces less sludge around the machinery, thereby improving the working environment.
4. Less foaming even at high-pressure injections.
5. Less dispersion or vaporization of active components during machine operation.
6. High versatility; can be used with both ferrous and non-ferrous materials.
7. Good performance at FIPG[※]test. Daphne Alphacool TS is a next generation ultra-versatile emulsion that meets all the above requirements. [※]FIPG : Form-In-Place-Gasket

1. Application

This oil can be used as a general-purpose cutting oil for aluminum alloys, carbon steel, alloy steel, and copper by dissolving in water. Specifically, this product can be used for turning, drilling, and end milling. In addition, this product does not contain chlorine nor boron, making it environmentally friendly as well as worker-friendly, good performance at FIPG test.

2. Characteristics

1. The unique base materials forms a thick and dense lubricating film on the processed surface, leading to high lubricity and excellent workability, while also extending the tool life and improving the accuracy of the finished product.
2. By using Idemitsu's unique heat resistant technology, we strengthen the interaction between surfactant particles, creating a thermally stable and non-volatile coolant, which suppresses the occurrence of mist and fume.
3. Good performance at FIPG test, so this coolant meet the needs of automobile and autoparts manufactures
4. Good anti-bacterial performance, the service life of coolant is prolonged, also reduces waste.
5. It has an anti-foaming performance that exceeds conventional emulsion oils, thereby preventing overflow of coolants.
6. By adopting materials that are resistant to degradation, this coolant possesses excellent cleaning ability and prevents stains around the machinery.
7. By adopting unique surfactants, it is difficult for emulsion break to occur. Even when the machinery is paused for extended periods of time, phase separation will not occur.
8. Prevent the breakage of tools during machine startup.
9. Since the pH value can be maintained across varying concentrations, rusting of work materials and machine tools is suppressed.

10. Due to its exceptional self-emulsifying property, it easily emulsifies even in tanks with less stirring power regardless of water temperature or hardness.
11. This product does not contain chlorine and boron.

3. Attention

For emulsification adjustment, please recharge Daphne Alphacool TS stock solution to water. The usable dilution ratio is 10X(10%) to 50X(2%). Please pay attention not to exceed this range.

4. Handling Precautions

1. Depending on a person's condition, skin irritation may occur. In that case, wash well with soap and use protective cream and gloves.
2. Please avoid accidental ingestion of product.

5. Packing

200 L drum can

DAPHNE ALPHACOOOL TS Typical Specifications

Test Item		TS Stock Solution	TS(10%)	TS(5%)
Density	@15°C (g/cm)	0.9279	-	-
Colour	ASTM D1500	L0.5	-	-
Flash Point	@C.O.C(°C)	None (non-dangerous goods)	-	-
pH		-	9.63	9.64
Foaming	Cylinder Shaking Method	-	9-0	7-0
Anti-rust (DIN test)	@Room Temperature*2h	-	0(Pass)	0(Pass)

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- Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provide in the Safety Data Sheet (SDS) are followed.
- SDS is available upon request through your sales contract office, or via the internet.
<https://www.idemitsu.com/jp/business/lube/>
- Due to continual product research and development, the information contained herein is subject to change without notification.

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