

## **DAPHNE ALPHACOOOL CX**

*~Grease-friendly 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 performance of an efficient and high-speed coolant can be summarized as follows:

1. Idemitsu's proprietary emulsion technology uses special surfactants to heighten emulsion stability.
2. along with additives with high antibacterial 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 component **while machine operation**.
6. High versatility; can be used with both ferrous and non-ferrous materials.
7. Good compatibility with grease. Daphne Alphacool CX is a next generation ultra-versatile emulsion that meets all the above requirements.

### **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 compatibility with grease.

### **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. It has good compatibility with grease and good anti-bacterial performance, the service life of coolants can be prolonged, also reducing waste.
4. It has an anti-foaming performance that exceeds conventional emulsion oils, thereby preventing overflow of coolants.
5. By adopting materials that are resistant to degradation, this coolant possesses excellent cleaning ability and prevents stains around the machinery.
6. 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**.
7. Preventing the breakage of tools during machine startup.
8. Since the pH value can be maintained across varying concentrations, rusting of work materials and machine tools can be suppressed.

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

### 3. Attention

For emulsification adjustment, please recharge Daphne Alphacool CX 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 strive to prevent accidental ingestion of product.

### 5. Packing

200 L drum can

#### DAPHNE ALPHACOOOL CX Typical Specifications

| Test Item            |                         | CX Stock Solution             | CX(10%) | CX(5%)  |
|----------------------|-------------------------|-------------------------------|---------|---------|
| Density              | @15°C (g/cm)            | 0.9127                        | -       | -       |
| Colour               | ASTM D1500              | L0.5                          | -       | -       |
| Flash Point          | @C.O.C(°C)              | None<br>(non-dangerous goods) | -       | -       |
| pH                   |                         | -                             | 9.80    | 9.84    |
| Foaming              | Cylinder Shaking Method | -                             | 9-0     | 9-0     |
| Anti-rust (DIN test) | @Room Temperature*2h    | -                             | 0(Pass) | 0(Pass) |

- 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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2022/5/2