



## **DAPHNE HI-TEMP OIL RM**

*~ Semi-Hot Oil for brightness type ~*

---

Daphne Hi-Temp Oil RM is a modified mal-quenching oil for open oil tank type. The quenching oil has an excellent brightness life time even in situations where contact with air.

A mal-quenching oil or a modified mal-quenching oil is used under high temperature so that oil oxidation degradation can be remarkable and the brightness can deteriorate in case quenching oil contact with air.

### **1. Application**

- Quenching of bearing races in a continuous type furnace like a mesh belt or a retort rocking furnace.
- Carburizing quenching of mission gears in a continuous type furnace like a tray pusher having open part.
- A case reducing a distortion for plating processed products like nails, bolts or flat springs

### **2. Characteristics**

- DAPHNE HI-TEMP OIL RM has great oxidation stability and especially it has hard formation of sludge and scale.
- The oxidation stability of DAPHNE HI-TEMP OIL RM prevents from a time change of cooling performance.
- If sludge and scale is produced by using on severe condition, it is easy to remove by a centrifugal separator or a filter separator and to recover the brightness.

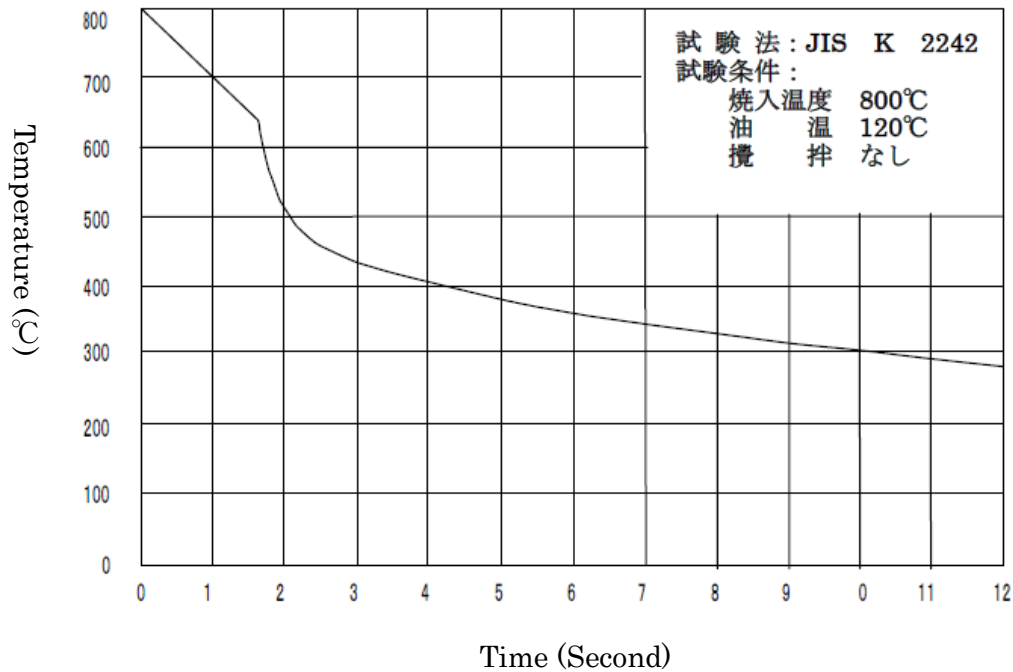
### **3. Attention**

- Daphne Hi-Temp Oil RM should be used at regular oil temperature from 70 degree to 120 degree.
- The quenching oil should be dehydrated in case more than 400 ppm moisture get mixed with it.

## 4. Specifications

Test Items		Value
Color	(ASTM)	L2.5
Flash point	(COC) °C	238
Viscosity	@40°C mm <sup>2</sup> /s	66.42
	@100°C mm <sup>2</sup> /s	9.156
Acid Number	mgKOH/g	0.18
Carbon residue content	wt%	0.42
H-Value @120°C	cm <sup>-1</sup>	0.111

## 5. Cooling Curve



## 6. Oxidation Stability Test (Indiana Stability Oxidation Test)

### (1) Condition

Oil Temperature :  $170 \pm 2.5^\circ\text{C}$

Air blowing : 10L / h

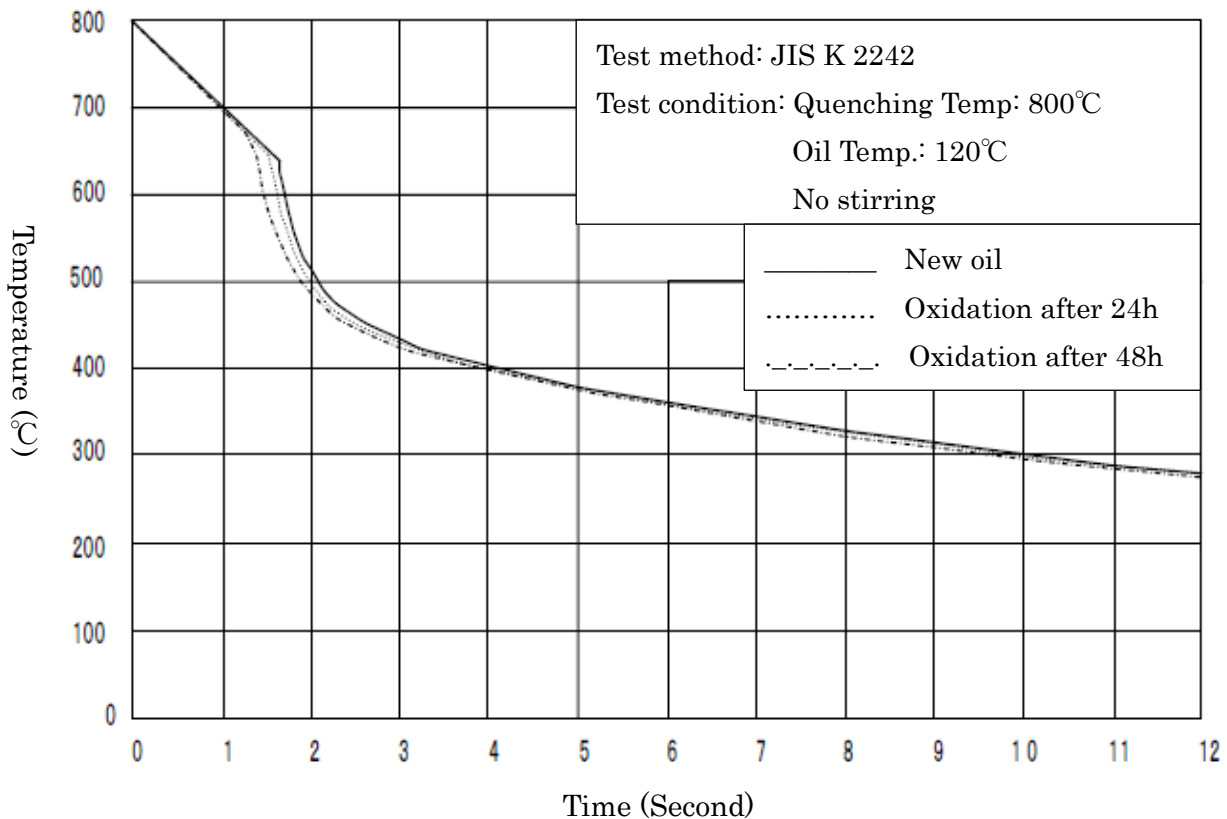
Test time : 24h, 48h

Catalysts : Cu · Fe

### (2) Results

Test Items	Test Time	0	24	48
Kinetic viscosity @100°C	mm <sup>2</sup> /s	16.95	17.19	17.56
Kinetic viscosity ratio to new oil		-	1.01	1.04
Acid Number	mgKOH/g	0.04	0.37	0.58
Carbon residue	wt%	0.46	0.48	0.53
Insoluble N-normal pentane	wt%	-	0.01	0.01
H value @120°C	cm <sup>-1</sup>	0.099	0.101	0.103
Brightness	%	82	88	86

## Cooling Curve after oxidative degradation



- 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.idss.co.jp/business/lube/>
- Due to continual product research and development, the information contained herein is subject to change without notification.

**Idemitsu Kosan Co., Ltd.**  
**Lubricants Department II**

1-1, Marunouchi 3-chome, Chiyoda-ku, Tokyo, 100-8321 Japan

Tel: +81-3-3213-3146, URL: <https://www.idss.co.jp/business/lube/>

BM 2019/09/01