



METAL WORK HS

Synthetic Oil for High Speed Electric Discharge Machining

METAL WORK HS is a highly refined synthetic hydrocarbon oil. **METAL WORK HS** demonstrates superior performances as electric discharge machining oil for high speed work, and also indicates high oxidation stability, scentless property, low skin irritancy and low risk of fire.

● Special Features

- METAL WORK HS** can realize productivity improvement by shortening time in the rough and finish machining due to its low viscosity and high insulation property.
- METAL WORK HS**, which has been used long time in a market, helps improvement of the work environment and efficiency by the selection of synthetic hydrocarbon oil with unscented nature and low skin irritancy.
- METAL WORK HS** is safe and low risk of fire in the handling due to relatively high flash point.
- METAL WORK HS** indicates less color change because of good oxidation stability, which helps the observation of the machining condition.

● SKD-11 Machining Test Result

In order to compare the efficiency of electric discharge machining, machining speed was measured with **METAL WORK HS** and commercially available synthetic oil (Oil A). **METAL WORK HS** showed superior performance.

METAL WORK HS	Oil A
80mg/min	64mg/min

<Machining Conditions>

Electrode: 10mm×10mm(Cu)
Surface Roughness: 35 μm R max.
Ip/10A, τ on/90 μ sec, τ off/25 μ sec

● Containers

200 liter drums & 20liter cans

● Typical properties of METAL WORK HS

Appearance		Transparent liquid
Color(Saybolt)		+20
Density		0.795
Kinematic viscosity(40°C)	mm ² /s	2.4
Flash point(PM)	°C	96
Pour point	°C	-12.5
Acid number	mgKOH/g	0.00
Distillation		
Initial Boiling Point	°C	224
End Point	°C	322

Note: The typical properties are subject to change without notice.



Handling Precautions

▼ Follow these precautions when handling this product.

<p>! CAUTION</p> <p>Handling Precautions</p>	<ul style="list-style-type: none">● <u>Inflammation can occur if oil enters the eyes.</u> When handling this oil, wear <u>protective goggles</u> or take other measures to <u>prevent eye contact</u>.● <u>Inflammation can occur if oil comes into contact with skin.</u> When handling this oil, wear <u>protective gloves</u> or take other measures to <u>prevent skin contact</u>.● <u>The inhalation of mist may cause discomfort.</u> When handling this oil, wear a <u>respirator</u> or take other measures to <u>prevent mist inhalation</u>.● Do not drink this oil. (Swallowing this oil can cause diarrhea and nausea.)● <u>Keep out of reach of children.</u>● Read the Material Safety Data Sheet (MSDS) for this product before using the product. Obtain the Material Safety Data Sheet from where you purchased the product.
<p>First Aid</p>	<ul style="list-style-type: none">● In case of eye contact, rinse eyes thoroughly with clean water and consult with a physician.● In case of skin contact, wash skin thoroughly with soap and water.● If mist is inhaled, move the person to a location with fresh air, wrap the person in a blanket, keep the person warm and quiet, and consult with a physician.● If this oil is swallowed, do not induce vomiting. Consult with a physician immediately.
<p>Disposal of Used Oil and Containers</p>	<ul style="list-style-type: none">● Do not apply pressure to empty containers. The containers may burst if pressure is applied.● Do not weld, heat, drill, or cut the containers. The remaining oil may ignite and the containers may explode.● Follow all applicable laws and regulations when disposing of used oil or containers. If you are unsure of the proper disposal methods, consult first with the seller of the oil.
<p>Storage Method</p>	<p>Seal the container tightly after use in order to prevent dirt, moisture, etc., from entering the oil. Store in a dark location. Avoid direct sunlight.</p>