

# UNIPRESS PA1, PA2, PA1L, PA-L

## Quick-Drying Metal Working Oil

UNIPRESS PA Series is quick-drying metal working oil for the punching of a thin plate as main application. It also provides excellent performance in the shallow drawing and bending of general metal materials except resin coating materials.

### ● Special Features

#### 1. Omission or simplification of degreasing and washing step

#### 2. Excellent drying property

UNIPRESS PA Series shows superior drying characteristics and does not leave oil on the press surface.

#### 3. Extension of the mold polishing interval

By the effect of high-performance anti-wear agent, extension of the mold polishing interval can be expected.

#### 4. Long-term superior finish accuracy

#### 5. Outstanding rust preventing property

It can prevent rust around 2-4 weeks in the indoor storage according to the environmental conditions.

#### 6. Chlorine-free oil

#### 7. Applicable to a wide range of materials

### ● Applications

(1) Electromagnetic steel, low alloy steel, hard aluminum, copper, copper alloy strips

(2) Press working such as punching, bending and shallow drawing of thin sheet (plate thickness: 1mm or less)

(3) Application Example

Processing of each part including motor, generator core, transformer iron core, electric equipment, household appliance, communication instrument, automobile, precision machinery, air-conditioning machine and office supplies.

### Example of use

(1) Punching of large generator core and large transformer iron core (type I and E).

(2) High speed punching of hermetic motor core for refrigerator.

(3) Stamping of small and middle-sized general-purpose motor core.

Electromagnetic silicon steel sheets: 0.35mm, 0.5mm, 0.8mm

General steel sheet (cold-rolled): 0.6mm

(4) Stamping and bending of the chassis of household appliance and parts of automobile.

Nickel silver: 0.8mm

Stainless: 0.4 ~ 0.6mm

General steel sheet (including bending): 0.8mm

(5) Shallow drawing, bending and stamping of home heating appliances.

Stove bottom plate, combustion tube, general steel sheet (cold-rolled): 0.4 ~ 0.6mm

### ● Performance comparison of the PA series

**PA1:** Standard type of quick-drying punching processing oil.

**PA2:** Low-odor compared with PA1, and contributes to the improvement of the working environment.

**PA1L:** Superior drying property compared with PA1.

**PA-L:** Superior drying property and improved extreme pressure performance compared with PA1. It is ideal oil for high-speed punching and welding work immediately after punching, enables life extension of high-speed punch and mold.

● **Containers**

200-liter drum, 20-liter can

● **Typical Properties of Unipress PA series**

Unipress		PA1	PA2	PA1L	PA-L
Item		Quick drying property	Low-odor	Superior drying property	Superior drying property, Improved workability
Color(ASTM)		L0.5	L0.5	L0.5	L0.5
Density (15°C)	g/cm <sup>3</sup>	0.775	0.749	0.768	0.766
Kinematic viscosity (40°C)	mm <sup>2</sup> /s	1.03	1.25	0.93	0.92
Flash point (TC)	°C	46.0	-	40.5	41.0
Flash point (PM)	°C	-	68.0	-	-
Pour point	°C	-45	-37.5	-37.5	-37.5
Copper strip corrosion(50°C,3h)		1	1	1	1

Note: The typical properties may be changed without notice. (December 2010)



**Handling  
Precautions**

▼ **Follow these precautions when handling this product.**

<p><b>! CAUTION</b></p> <p><b>Handling Precautions</b></p>	<ul style="list-style-type: none"> <li>● <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>.</li> <li>● <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>.</li> <li>● <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>.</li> <li>● Do not drink this oil. (Swallowing this oil can cause diarrhea and nausea.)</li> <li>● <u>Keep out of reach of children.</u></li> <li>● Read the Safety Data Sheet (SDS) for this product before using the product. Obtain the Safety Data Sheet from where you purchased the product.</li> </ul>
<p><b>First Aid</b></p>	<ul style="list-style-type: none"> <li>● In case of eye contact, rinse eyes thoroughly with clean water and consult with a physician.</li> <li>● In case of skin contact, wash skin thoroughly with soap and water.</li> <li>● 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.</li> <li>● If this oil is swallowed, do not induce vomiting. Consult with a physician immediately.</li> </ul>
<p><b>Disposal of Used Oil and Containers</b></p>	<ul style="list-style-type: none"> <li>● Do not apply pressure to empty containers. The containers may burst if pressure is applied.</li> <li>● Do not weld, heat, drill, or cut the containers. The remaining oil may ignite and the containers may explode.</li> <li>● 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.</li> </ul>
<p><b>Storage Method</b></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>