

UNIPRESS PA1, PA2(N), 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: 0.5mm 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(N): 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	PA2N)	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 ³	0.775	0.763	0.770	0.768
Kinematic viscosity (40°C)	mm ² /s	1.03	1.31	0.985	0.977
Flash point (TC)	°C	42.0	51.0	41.0	41.0
Pour point	°C	-45.0	-40.0	-45.0	-45.0
Copper strip corrosion (50°C,3h)		1	1	1	1

Note: The typical properties may be changed without notice. (October 2025)

● Handling Precautions

- **For the handling of this product:** Please read the Safety Data Sheet (SDS) for this oil and the handling precautions listed on the product container carefully before use.
- **Regarding obtaining the SDS:** Please note that Safety Data Sheets (SDS) should be obtained via commercial channels and cannot be provided by the ENEOS Customer Center.
- The properties and performance listed are based on measurements and insights from our testing methods and do not guarantee accuracy or completeness. The typical properties may be changed without notice.