



# HD 1100-83

## Severe-Duty Soluble Oil Stamping Fluid

Metal Mates HD 1100-83 is a soluble oil designed for very difficult severe-duty stamping operations including high temperature stamping, drawing, piercing, and flanging in a variety of steel products.

HD is an oil-based lubricant designed to be soluble in water. It provides a protective oil barrier and high levels of extreme pressure additives, making it ideal for very difficult applications including high-temperature operations, and complex die designs. It is formulated with anti-wear additives that reduce scoring in progressive die and multi-forming operations to extend tooling life while improving product finish.

HD is used extensively for automotive hinges and steering mechanisms. It provides excellent rust protection and is easy to clean. Recommended for use with 0.100" - 0.330" thick cold-rolled, electro-galvanized (galvanneal), hot-dip galvanized, stainless, high-strength steel (HSS), and ultra-high-strength steels (UHSS).

### FEATURES

- Excellent Lubricity
- Water-Soluble
- Good corrosion protection
- Stands up well to extreme pressure applications
- Compatible with carbide tooling

### APPLICATIONS

- Heavy & Severe-Duty Stamping Applications including:
- Excellent for all heavy-gauge components
- Hole punching through SS, UHSS, etc.
- Please call for consultation on specific applications

### DIRECTIONS

Dilute Metal Mates HD with water to suit the specific application.

Heavy-Duty: 3:1 to 8:1 (25-11%)

NOTE: These dilution ratios should only be used as general guidelines and are not exact specifications. Please contact your Metal Mates Regional Sales Manager for an application specific recommendation. Slowly add water to lubricant while mixing. Water quality enhances the performance of all water-dilutable lubricants.



### PROPERTIES

<b>Odor</b>	typical, mild
<b>pH Value</b>	8.7-9.7
<b>Specific Gravity</b>	1.03
<b>Flash Point</b>	>200F (>93C)
<b>Boiling Point / Range</b>	212F (100C)
<b>Vapor Pressure</b>	<1
<b>Vapor Density</b>	Heavier than air
<b>Prop 65 Warning</b>	No
<b>Total Chlorine</b>	Y
<b>Refractometer Readings</b>	7-24 RI
<b>Dilution Ratio</b>	Typical Dilution: 3:1 to 8:1 (25 to 11%)



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### HANDLING

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Use appropriate safety equipment. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep away from extreme heat. Keep container closed when not in use.

### STORAGE

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Store away from extreme heat, flame, or ignition sources. Pressure buildup may occur due to heat exposure or temperature change. Release pressure by slowly opening container.

### DISPOSAL

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Absorb with suitable material and follow procedures shown on SDS. Dispose of in a manner that is recommended by local, state, provincial, and federal laws and regulations.

### AVAILABLE PRODUCTS

Part No.	Net Contents	Container Type	Units/Case
MM3202	5 gal	pail	1
MM3203	55 gal	drum	1
MM3206	330 gal	tote	1



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