



## PRODUCT INFORMATION

# Hasco Forge FE4-331A

WATER BASED FORGING LUBRICANT

### Description

Hasco FE4-331A is a high performance, water based forming lubricant designed for aluminum ring and billet rolling. FE4-331A's fully synthetic technology minimizes aluminum pick up on the work rolls during the rolling process and allows the rolls to glide the ring into precision shape while decreasing the force needed for formation.

### Application

FE4-331A is designed for the hot rolling of aluminum billets and rings. The fluid can be applied either by spray or swab to the rolls. The ring table can also be sprayed or swabbed to reduce pickup.

FE4-331A can be used neat or cut back 4:1 for less difficult operations.

### Advantages

- High detergency results in a clean running system, minimizing pit marks and work roll changes
- Excellent lubricity package reduces forces needed to form parts
- Synthetic chemistry minimizes the formation of smoke
- Petroleum free to reduce the risk of fire

### Typical Characteristics

	Unit	Test Method	Value
Appearance	Visual	Visual	Colorless to Slightly Hazy Yellow Liquid
pH of concentrate	-	ASTM E 70	7.8 – 8.2
Specific Gravity @ 60°F	-	ASTM D 1298	0.97 – 1.01
Density @ 60°F	lb/gal	ASTM D 1298	8.3

### User Advice

FE4-331A can be removed with mild alkaline, aluminum compatible cleaner.