



# Product Data Sheet

## Deltaforge® F-578

Forging die lubricant

### DESCRIPTION

**Deltaforge F-578** is a new forging die lubricant based on our award winning Deltaforge F-31, the world's most widely used forging die lubricant. It retains the same performance as Deltaforge F-31 but with some important differences.

**Deltaforge F-578** is an ammonia free graphite dispersion making it essentially an odourless, smokeless, water-based graphite die lubricant.

It is formulated to provide excellent lubricity and release when used on difficult press work and highly automated processes, including hot, warm, and precision forging.

**Deltaforge F-578** further differentiates itself from Deltaforge F-31 by creating an easy to wash-off coating, thus reducing downtime lost due to maintenance work.

**Deltaforge F-578** contains a unique graphite particle size and configuration, along with a special stabiliser and binder system.

**Deltaforge F-578** exhibits improved stability with no separation or settling in the concentrate, even under adverse conditions. This assures constant quality from top to bottom and results in consistent forging performance.

### BENEFITS

- Uniform lube film formation on dies up to 400°C
- Ammonia Free
- Reduced scrap and rework
- Improved part quality
- Less billet material needed
- Improved productivity
- Easy wash-off
- Reduced press downtime
- Lower waste disposal costs
- No build-up in die cavity
- Lowest die cost per forging

### TYPICAL APPLICATIONS

- Hot and Warm Forging
- Precision Forging
- Hot Forging Powder Metal

### PHYSICAL PROPERTIES (as supplied)

Appearance :	Medium viscous liquid
Pigment :	High purity micro graphite
Carrier :	Water
Diluent :	Water
Density :	1102 kg/m <sup>3</sup>
pH :	ca 11.5
Shelf Life :	24 months from date of qualification under original seal

### METHOD OF USE

#### Dilution

**Deltaforge F-578** is supplied as a concentrate and can normally be diluted with ordinary tap water prior to use. However, if the tap water is extremely high in mineral content, check with your Acheson representative for assistance.

**IMPORTANT:** Add water to the concentrate, not the reverse. Stir the concentrate thoroughly, then add one part water slowly while stirring until the mixture is homogenous. The remaining water may be added rapidly while stirring until the desired dilution is reached.

#### Dilution Ratios

The recommended dilution ratio depends on the difficulty of the job and the cooling

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required. For initial trials, a ratio of one part **Deltaforge F-578** to ten parts water by volume is proposed. Ratios of 1:20 and greater are common during production. Use a more concentrated mixture, 1:3 (product:diluent), to lubricate tooling hotter than 320°C.

Application

For best results, diluted **Deltaforge F-578** should be applied by conventional spray techniques. Spray application provides uniform coating thickness, complete die coverage, and lower friction values. Manual and automatic spray systems especially designed for application of die lubricants are available from Acheson Colloids Company.

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**STORAGE/  
HANDLING**

-Store **Deltaforge F-578** in a cool place, but do not allow it to freeze. Product should not be used once frozen.

-Always tightly reseal the container to prevent evaporation or contamination

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**HEALTH & SAFETY**

Please consult Material Safety Data Sheet.

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**NOTES**

**Deltaforge®** is a registered trademark of Henkel AG & Co KGaA.

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