# CASE STUDY

MOVING YOUR WORLD



## **High-performance metalworking**

Application: ECOCOOL GLOBAL 1000 Location: USA

### Customer

A leading US manufacturer in the aerospace sector machining components for both the commercial & military aerospace sectors.

### Challenge

This Aerospace Manufacturer faced significant challenges with their existing metalworking fluid. The competitor product they were using caused damage to their machine tools, resulting in seal failures and degradation of hydraulic lines. Concerned about productivity losses and maintenance costs the customer sought a solution that would enhance performance, extend tool life, and improve overall machining efficiency.

### **Solution**

The customer turned to FUCHS, as a renowned lubricant provider, for assistance. FUCHS recommended ECOCOOL GLOBAL 1000, a coolant specifically designed for high-performance metalworking applications.

### **Key features**

Boron-Free Chemistry

ECOCOOL GLOBAL 1000 is formulated without boron, ensuring environmental compliance and workplace safety.

Patented Technology

Based on FUCHS' patented technology, this coolant offers advantages in application, monitoring, and maintenance.

• Broad Compatibility

It is effective on various materials, including aluminum, titanium, Inconel, and stainless steel.

• High Lubricity

The novel lubricity package enhances machining performance, especially in titanium milling.

### **Advantages**

Improved tool life

- Improved sump life
- Improved machine cleanliness
- **Reduced machine tool damage**

**Reduced downtime** 

**Globally compliant** 

Aerospace industry approved



FUCHS LUBRICANTS CO. 17050 Lathrop Ave. Harvey, IL 60426 Phone + 1 708-333-8900 E-mail inquiry@fuchs.com www.fuchs.com/us

# CASE STUDY

### MOVING YOUR WORLD



## **High-performance metalworking**

### Results

After implementing ECOCOOL GLOBAL 1000, the customer experienced remarkable improvements:

- Tool Life Doubling Titanium machining saw a significant boost in tool life, leading to reduced tool breakages and increased productivity.
- Enhanced Coolant Sump Life The fluid's stability extended the lifespan of the coolant sump, reducing maintenance frequency.
- Improved Machine Cleanliness ECOCOOL GLOBAL 1000 maintained machine cleanliness, preventing damage to paint, seals, and plastic components.
- No Further Damage Unlike the previous coolant, there was no evidence of additional damage to machine parts.

### **Rollout Across North America**

Thrilled with the results, the customer decided to adopt ECOCOOL GLOBAL 1000 across all their sites in North America. The fluid not only resolved their initial concerns but also contributed to overall operational excellence.



#### FUCHS LUBRICANTS CO. 17050 Lathrop Ave. Harvey, IL 60426 Phone + 1 708-333-8900 E-mail inquiry@fuchs.com www.fuchs.com/us

### **Advantages**

Improved tool life

**Improved sump life** 

Improved machine cleanliness

Aerospace industry approved

**Cost saving** 

**Multi-metal compatibility** 

**Zero staining** 

### FRICTION SIMULATION/TAP TORQUE TEST

ECOCOOL GLOBAL 1000 is compared to an aerospace industry metalworking fluid. (Lower torque is better)

