



## Improving Sump Life in Magnesium Machining with ECOCOOL Global 1000 & Fluid Vision Monitoring

**Application: Milling Magnesium**  
**Location: Texas, USA**

### Challenge

An aerospace customer was forced to scrap a magnesium (Mg) part after their previous machining fluid allowed the formation of magnesium soaps that led to parting, this ultimately cost them \$45,000 per month. After investigating, they discovered that the coolant in the tank had been split. Engineers completed a thorough analysis by studying tanks dedicated to machining Mg and determined that the sumps should be changed every four weeks.

### Solution

ECOCOOL Global 1000 was trialed to see if they could improve sump life. Fluid Vision monitoring was also installed using a conductivity sensor to monitor the coolant.

### Results

ECOCOOL Global 1000 extended the sump life by more than 10X. The customer is also using Fluid Vision and ECOCOOL 7830B on other machines to determine fluid condition before the customer prematurely dumps the tank after four weeks. Mg can present significant challenges to a coolant but ECOCOOL GLOBAL 1000 can overcome these challenges. By moving forward with these coolants, the customer sees a return on investment through less sump changes, less coolant usage, and less scrapped parts.

### Advantages

Longer Sump Life

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Less Scrap

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Improved Fluid Monitoring

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Predictive Maintenance vs  
Preventative Maintenance