

# Smoke/Mist and Residues Eliminated

## Prototype Manufacturing (USA)

Prototype Job Shop

Castrol Alusol® SL 61 XBB

**ANNUAL SAVINGS: \$132,500**



### THE SITUATION

A prototype part manufacturer was having issues with the previous coolant in use. The coolant left the plant filled with smoke, making it difficult to see from one end of the plant to the other. Additional problems included residues, corrosion, foam, and high usage. The facility contains over 300 CNC machining centers, each with individual coolant sumps.

### BEFORE

- Smoke / mist in plant
- Heavy residues on machines
- Staining and corrosion of parts
- Foam-overs in sumps
- 4 - 5% part rejection rate

### AFTER

- No smoke or mist
- Residues eliminated
- No corrosion or staining
- No foam in sumps
- Part rejection rate only 0.5%
- Coolant usage reduced by 33%

### THE SOLUTION

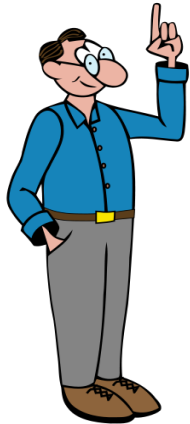
- Alusol SL 61 XBB is capable to handle the wide variety of materials and operations for this customer.
- Improvement of the smoke/mist was a top priority and this was eliminated through improved cooling and lubrication from Alusol SL 61 XBB. Cost savings were achieved due to less frequent exhaust filter changes (extended from every 2 weeks to every 3 months).
- The heavy residues were eliminated and allowed the operators to see through the windows of the machines to view the process.
- Excellent foam control from Alusol SL 61 XBB prevented foam-over problems.
- Part rejection that was mainly from tooling issues with the previous coolant dropped from an average of 4.5% to 0.5%.

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## RECOMMENDATIONS

Alusol SL 61 XBB was the perfect coolant for the customer's situation. The fluid needed to be compatible with the wide variety of materials being machined, including various types of aluminum, steel, stainless, Inconel, Titanium, copper, and plastic. It also needed the capability to handle multiple operations such as milling, drilling, turning, boring, cut tapping, form tapping, honing and reaming.

Since the facility utilized small individual sumps, a long lasting coolant was also needed.



*"We needed a company that we could trust to solve our issues. Castrol delivered that with top of industry products and engineering support. We could not have worked with a better supplier."*

-- Maintenance Supervisor

## CONCLUSION

The Alusol SL 61 XBB delivered excellent performance across this plant. All the smoke/mist issues were eliminated. The residues no longer persisted. All expectations were exceeded with the high performance of Alusol SL 61 XBB.

**The final result was over \$130,000 in annual savings from lower usage, less exhaust filter changes, and improved part quality.**



## OTHER POTENTIAL APPLICATIONS

Alusol SL 61 XBB is a high performance semi-synthetic coolant capable of machining almost any metal type and provides excellent control of foam, residues, and mist.