

NuSOL® ALUMAX

METAL WORKING FLUID



CUSTOMER: HYDRAULIC CYLINDER MANUFACTURER

PRODUCT

NuSol® Alumax is a non-chlorinated technology for the machining of non-ferrous metals and exotic alloys. NuSol® Alumax is formulated for all machining operations on all metals but is specifically designed to machine today's tougher non-ferrous and aluminum alloys. NuSol® Alumax is manufactured using a proprietary blending process that incorporates many unique characteristics into the product that will promote high productivity rates and minimal downtime for the end user.

NuSol® Alumax is formulated using a blend of unique preformed emulsions that possess a very small particle size and which demonstrate outstanding boundary lubrication. This small particle size provides a very durable and uniform lubricant film, enhanced wetting and coverage, a very clean running fluid, and exceptional hard water stability for enhanced machining performance on non-ferrous and aluminum alloys. NuSol® Alumax preformed emulsions are further complemented with the presence of a surfactant package, offering enhanced boundary lubrication and fluid detergency and cleanliness.

PROCESS AND EQUIPMENT

Industry/Market	Industrial
Product Type	Metal Working Fluid
Product Number	27023F0000
Machinery Involved	CNC Lathes, Mills
Description of Environment	Machine Shop
Volume Used	\$50,000 per year
Date of Use	May 2016 - Present
Documented Cost Savings	N/A

▷ **DESCRIPTION OF PROBLEM**

Plant had multiple machines with rancid odors and were changing sump out monthly. Experiencing coolant smoking in shop. Tool life was shorter than expected.

▷ **SOLUTION**

Installed NuSol® Alumax coolant in lathe and mill CNC. Tooling life increased from 200-500% on lathe and up to 30% increase on mills with carbide drill and reamer. Coolant consumption was reduced from three gallons per week to one gallon per week. After seven months of use, biological or smoking issues have been eliminated.

Installed NuSol® Alumax coolant in lathe making aluminum parts. Previous heavy-duty, semi-synthetic coolant could only cut at 1500 rpm speed/feed rate without sacrificing tooling and finish on part. Use of NuSol® Alumax allows increase to 2500 rpm speed/feed rate, while lowering the production time per part from 4:12 minutes to 2:17 minutes, a 45% faster production.

▷ **CUSTOMER TESTIMONIAL**

North Plant changed over in late April 2016, and South Plant is buying tote to make changeover immediately after production increase trial.