

NUSOL® ALUMAX 90

METAL WORKING FLUIDS
Technical Data Sheet

HYBRID TECHNOLOGY METALWORKING FLUID FOR NON-FERROUS METALS/EXOTIC ALLOYS

PRODUCT DESCRIPTION

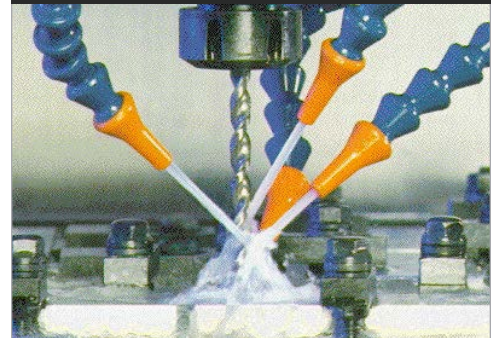
NuSol® ALUMAX 90 is a completely new technology that Chemtool Incorporated has introduced to the metalworking industry for the machining of non-ferrous metals and exotic alloys. NuSol® ALUMAX 90 is formulated for today's competitive manufacturing environment which demands one fluid for all machining operations. This incorporates all metals including all non-ferrous and aluminum alloys and tough exotic ferrous alloys. Lubrication performance is elevated by the presence of a hydrolytic additive which upgrades the thermal stability and oxidation resistance of the fluid during the lubrication process. NuSol® ALUMAX 90 is manufactured using a proprietary blending process that incorporates into the product many unique characteristics that will promote high productivity rates and minimal downtime for the end user.

NuSol® ALUMAX 90 is formulated using a blend of unique preformed emulsions that possess a very small particle size that demonstrates outstanding boundary lubrication (average particle size of one micron). This small particle size provides for 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 90 preformed emulsions are further complemented with the presence of a balanced surfactant package that offers enhanced boundary lubrication and fluid detergency and cleanliness. Additional additives formulated into the product provide supreme detergency and machine surface cleanliness as well as tough resistance to hard water soap formation. NuSol® ALUMAX 90 represents the culmination of the NuSol® ALUMAX product line.

FEATURED BENEFITS

- Resistant to "Monday Morning Odors." Inherent biostable chemistry maintains pH and alkalinity eliminating objectionable odors.
- Excellent corrosion protection for all tooling, equipment, and parts
- Outstanding lubricant film strength for good tool life and finish on all metals
- Extremely small particle size for superior wetting and coverage on all metals
- Excellent resistance to the negative effects of hard water chemistries
- Superior lubrication regime offers performance across the temperature spectrum
- Halogen free and low foaming
- High degree of cleanliness and low reportable VOC values for worker safety

PRODUCT APPLICATION



COMPATIBLE METALS

Cast Iron
Carbon Steel
Tool Steel
Stainless Steel
Aluminum
Titanium
Inconel
Bronze
Copper
Brass

MACHINING CAPABILITIES

Milling
Turning
Sawing
Drilling
Reaming
Tapping
OD/ID/Centerless Grinding
Burnishing
Light Duty Hobbing & Broaching
Medium-Duty Stamping & Drawing

HIGH PRESSURE COOLANT CAPABILITY

Yes

ALL METAL SAFE

Yes

REFRACT INDEX

2.4

PRODUCT SPECIFICATIONS

Fluid Type	Hybrid metalworking fluid
Appearance	Translucent emulsion
Odor	Mild
Specific Gravity, 60°F (15.6°C)	1.01
Weight, lb/gal., 60°F (15.6°C)	8.40
pH (concentrate)	9.60
pH (10% dilution)	9.30
Biostability	Excellent

PRODUCT APPLICATION / USAGE

NuSol® ALUMAX 90 is recommended for general purpose machining of aluminum alloys, nonferrous alloys and tougher exotic alloys (both non-ferrous and ferrous).

Operation	Aluminum Alloys	Copper and Brass	Ferrous Alloys
Milling, Drilling, Turning	8 – 14%	7 – 12%	8 – 15%
Reaming, Light Duty Broaching, Milling, Tapping, Sawing	8 – 15%	8 – 13%	9 – 16%
Grinding: I.D., O.D.	7 – 9%	6 – 9%	6 – 10%

MIXING DATA

NuSol® ALUMAX 90 metalworking fluid is to be mixed with water for use. Always add product concentrate to the water, not water to product concentrate. Add with mild agitation. Product concentration can easily be monitored by refractometer.

Concentration	16.8%	12.0%	9.6%	4.8%	2.4%
Refractometer Reading	7	5	4	2	1

AVAILABILITY

275 Gallon Tote
55 Gallon Drum
Bulk Quantity

27023M0000-CT2305
27023M0000-CT3305

HEALTH AND SAFETY

For health and safety guidance, please refer to the Chemtool SDS (Safety Data Sheets).



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