

# NU SOL<sup>®</sup> 21 HIGH PERFORMANCE

NEW TECHNOLOGY METALWORKING FLUID FOR ALL METALS:  
PAO BASED

## ▷ PRODUCT DESCRIPTION

**NuSol<sup>®</sup> 21 High Performance** is a completely new technology that Chemtool Incorporated is introducing to the metalworking industry. NuSol 21 High Performance is like no other metalworking fluid on the market today. NuSol 21 High Performance is manufactured using a proprietary process that incorporates into the product many unique characteristics which promote very high productivity and minimal downtime for the end user.

NuSol 21 High Performance is formulated utilizing a preformed emulsion of very small and stable particle size (average particle size of one micron). This small particle size provides a very durable and uniform lubricant film (based upon synthetic boundary lubricants), enhanced cooling, a very clean running fluid, and exceptional hard water stability. The incorporation of this leading edge PAO technology enables NuSol 21 High Performance to exhibit superior lubrication comparable to existing synthetic technologies with the advantages of superior surface cleanliness, improved deposit control and outstanding hydrolytic stability.

NuSol 21 High Performance is the bedrock of the NuSol<sup>®</sup> family of products.

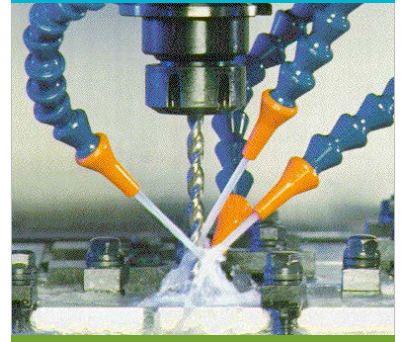
## ▷ FEATURED BENEFITS

- Will not produce “Monday Morning Odors.” The biostable chemistry maintains the pH eliminating objectionable odors.
- Excellent corrosion protection for all tooling, equipment, and parts.
- Exceptional lubricant film for good tool life based upon synthetic technologies.
- Extremely small particle size for superior wetting.
- Excellent hard water stability.
- Very low reportable VOC’s for operator acceptance.
- High degree of cleanliness.
- Higher viscosity oils offer improved hydrodynamic lubrication without heavy oil content limiting coolant carry-off and providing a cleaner machine interior.
- High flash point oils eliminate mist and evaporation that reduces coolant cost and promotes a healthy work environment.
- Proven history of being operator safe.
- Tramp oil rejection eliminates a source for bacteria and rancid odors that reduces sump change outs, disposal costs, and machine downtime.

## ▷ APPROVALS

- Chrysler Approved cutting fluid for aluminum and steel machining MPN: 470501646
- Super-compliant for California SCAQMD Rule 1144

## APPLICATION



### COMPATIBLE METALS

Carbon Steel  
Tool Steel  
Stainless Steel  
Light-Duty Aluminum  
Bronze  
Copper  
Brass

### MACHINING CAPABILITIES

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

### HIGH PRESSURE COOLANT CAPABILITY

Yes

### ALL METAL SAFE

Yes

### REFRACT INDEX

2.9



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## TECHNICAL DATA



### TYPICAL PROPERTIES

Fluid Type	New technology, semi-synthetic metalworking fluid
Appearance	White, translucent emulsion
Odor	Mild odor
Specific Gravity, 60°F (15.6°C)	1.035
Weight, 60°F (15.6°C)	8.63 lbs/gal.
pH (10% dilution)	9.40
Biostability	Excellent
VOC, ASTM E 1868	48.0 grams/liter

### PRODUCT APPLICATION / USAGE

NuSol 21 High Performance is recommended for general purpose machining of ferrous and non-ferrous alloys.

Operation	Carbon Steels, Cast Iron Alloys	High Alloy Steels	Aluminum Alloys
Milling, Drilling, Turning	6%	6–10%	6–12%
Reaming, Light Duty Broaching, Tapping, Sawing	6–9%	6–12%	6–14%
Grinding: I.D., O.D.	6–7%	6–8%	6–8%

### MIXING DATA

NuSol 21 High Performance 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	9.0%	7.5%	6%	4.5%	3.0%
Refractometer Reading	3.0	2.5	2.0	1.5	1.0

### PRODUCT CODE

2707500000

### HEALTH AND SAFETY

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