

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

## METALWORKING FLUID FOR AEROSPACE ALLOYS

### ▷ PRODUCT DESCRIPTION

**NuSol<sup>®</sup> 21 High Performance BOMA** is a completely new technology that Chemtool Incorporated has introduced to the metalworking industry for the machining of non-ferrous metals and exotic alloys usually encountered in the aerospace industry. NuSol<sup>®</sup> 21 H.P. BOMA is formulated for today's competitive manufacturing environment, which demands one fluid for all machining operations of various alloys.

NuSol<sup>®</sup> 21 H.P. BOMA is formulated using a blend of unique preformed emulsions that possess a very small particle size, demonstrating outstanding boundary lubrication (average particle size of less than 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<sup>®</sup> 21 H.P. BOMA preformed emulsions are further complemented with the presence of a balanced surfactant package, offering enhanced boundary lubrication, 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.

### ▷ FEATURED BENEFITS

- Biostable chemistry that maintains the pH, 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 performs across the temperature spectrum
- Halogen free and low foaming
- High degree of cleanliness and low reportable VOC values

### ▷ APPROVALS

- Bombardier Aproved BAMS 569-001 Class A and Class C Lubricants

### APPLICATION



### COMPATIBLE METALS

Aluminum Alloys  
Non-Ferrous Alloys  
Exotic Alloys

### MACHINING CAPABILITIES

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



# NUSOL® 21 HIGH PERFORMANCE BOMA

TECHNICAL DATA

## TYPICAL PROPERTIES

Fluid Type	Metalworking fluid
Appearance	White, translucent emulsion
Appearance (10/1 Emulsion)	Off-white, translucent emulsion
Specific Gravity, 60°F (15.6°C)	1.01
Weight, 60°F (15.6°C)	8.40 lbs/gal.
pH (Concentrate)	9.70
pH (10% dilution)	9.40
Biostability	Excellent

## PRODUCT APPLICATION / USAGE

NuSol® 21 High Performance BOMA is recommended for general purpose machining of aluminum alloys, non-ferrous alloys, and tougher exotic alloys (both non-ferrous and ferrous).

Operation	Aluminum Alloys	Copper and Brass	Ferrous Alloys
Milling, Drilling, Turning	8 – 12%	7 – 11%	8 – 15%
Reaming, Light Duty Broaching, Milling, Tapping, Sawing	8 – 14%	7 – 12%	9 – 15%
Grinding: I.D., O.D.	6 – 9%	6 – 9%	6 – 10%

## MIXING DATA

NuSol® 21 High Performance BOMA 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 or Chemtool Titration Kit.

Concentration	16.2%	13.5%	10.8%	5.4%	2.7%
Refractometer Reading	6.0	5.0	4.0	2.0	1.0

## PRODUCT CODE

27074A0000

## HEALTH AND SAFETY

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