



CIMPULSETM

ONE FLUID ALL SHOPS

*The New Family of Metalworking Fluids
All Markets, All Operations*

YES



ONE FLUID FOR ALL MARKETS

CIMPULSE™ 51MP

CIMPULSE 51MP is a multi-purpose, heavy-duty fluid for machining and grinding. It offers high performance without the use of traditional extreme pressure lubricants and is recommended for machining and grinding for most metals other than magnesium alloys or cast aluminum.

- Hybrid Lubricity Oil Containing Fluid
- DCHA, Triazine and Chlorine Free
- Works Well in High Pressure Applications- Even in Soft Water
- Customer Results Gave 20% Better Tool Life; 20% Better Sump Life
- Excellent in CNC Machines
- Excellent Hard Water Tolerance

CIMPULSE™ 33MP

CIMPULSE 33MP is an oil free multi-purpose, moderate to heavy duty fluid for machining and grinding. It offers high performance without the use of traditional extreme pressure lubricants and is recommended for turning, drilling, milling, reaming, boring, tapping, and grinding of most metals. CIMPULSE 33MP can be used on nearly all metal removal applications including form tapping. Not recommended for magnesium alloys.

- Oil Free Product
- For Use on Ferrous and Aluminum Alloys
- Low Foam Even in High Pressure Applications
- Excellent Oil Rejecting Qualities
- Excellent On Titanium and Hard Metal Alloys
- Residue Easily Removed with Water
- DCHA, Triazine and Chlorine Free

CIMPULSE™ 45MP

CIMPULSE 45MP is an oil-containing multi-purpose fluid for machining and grinding. It offers a wide range of performance capability without the use of traditional extreme pressure lubricants and is recommended for machining of most metals. Not recommended for magnesium alloys.

- Oil Containing Product
- Good Multi-Metal Compatibility (Great for Job Shops)
- Good for Nearly All Metal Removal Applications
- DCHA and Chlorine Free
- Excellent Sump Life
- Very Clean Running on Parts and Machines



ABOUT CIMCOOL

CIMCOOL brands have been recognized as the leader in the metalworking fluid industry since 1947, when CIMCOOL pink fluids were first introduced at a major trade show. Providing unparalleled technology and service, no other company offers the performance value of CIMCOOL fluids.

Cimcool Laboratories develop new products that lead the industry. CIMCOOL scientists are globally located in R&D Centers of Excellence to better serve your needs. We also have multiple customer service laboratories regionally available to help our customers.



*Pink fluids and Pink drums are registered trademarks of Milacron

CIMPULSE™ 'GO TO' FLUIDS.

CIMPULSE™ 51MP Case History



Part: Steel component & hardware used in bridges & assemblies
Material: Hardened steel and nickel steel alloys
Machining: Tuning & threading of hardware components
Sump Size: 30 to 50 gallons; 25 machine tools
Turnover: High pressure sumps turnover in 2 to 3 minutes; high churn
Pressure: Up to 300 psi

Water: DI water

Customer Requirement: Customer was happy with competitive fluid but agreed to test Cimpulse 51MP to assure them they had a good process. Cimpulse 51MP provided a low foaming fluid with superior lubricity and excellent sump life and mix stability.

Customer Benefit: The customer recognized that Cimpulse 51MP provided >18% better tool life and >10% better surface finish on hard metal parts. Cimpulse 51MP foamed much less than the competitive fluid resulting in more uptime due to lower maintenance. The sump life and mix stability were superior and with overall process improvements, the customer estimated "significant" reduction in costs due to less downtime and maintenance. They switched their entire manufacturing plant over to Cimpulse 51MP.

CIMPULSE™ 33MP Case History



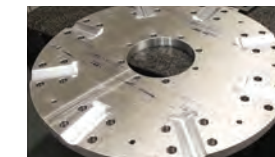
Part: Band and mounted saw blades
Material: Steel, alloyed steels; carbide tipped blades
Grinding: Creep feed grinding of band-saw teeth blades with conventional abrasives
Sump Size: Two 5,000 gallon vacuum filtration systems
Turnover: Every 12 to 14 minutes
Pressure: 175 psi

Water: 125 ppm total hardness

Customer Requirement: Provide a low foaming fluid that provides superior lubricity with no residue. Residue of the competitive synthetic interfered with down-stream sizing operations.

Customer Benefit: Cimpulse 33MP left minimal residue, eliminated all foaming issues, and provided better abrasive life than competitive fluid. The customer experienced savings >20% in abrasive setup, wear and maintenance downtime.

CIMPULSE™ 45MP Case History



Part: Press and power transmission components; bearings
Material: 52100 bearing Steel, aluminum, 304 stainless and bronze alloys; 4140 heat-treated steel; 1045 steel
Machining: Milling, drilling and turning
Sump Size: Small machine sumps ("Job Shop")
Turnover: 3 to 4 minutes
Pressure: Flood application

Water: 120 to 200 ppm total hardness

Customer Requirement: Longer sump life and odor control, but operators were experiencing dermatitis with competitive fluid. Customers also expected clean parts and good finish to be maintained.

Customer Benefit: Operator acceptance was excellent. CIMPULSE 45MP solved their dermatitis issues and sump life was 2X better with cleaner machines and parts.

CIMPULSE™ APPLICATION GUIDELINES; Ferrous Alloys								
Product Name	Oil	Lubrication	Drilling	Milling	Turning	Cut Tap	Form Tap	Grinding
CIMPULSE™ 51MP	Yes	Heavy	✓	✓	✓	✓	✓	✓
CIMPULSE™ 33MP	No	Heavy	✓	✓	✓	✓		✓
CIMPULSE™ 45MP	Yes	Moderate	✓	✓	✓	✓	✓	✓

CIMPULSE™ APPLICATION GUIDELINES; Aluminum Alloys								
Product Name	Oil	Lubrication	Drilling	Milling	Turning	Cut Tap	Form Tap	Grinding
CIMPULSE™ 51MP	Yes	Heavy	✓	✓	✓	✓	✓	✓
CIMPULSE™ 33MP	No	Heavy	✓	✓	✓	✓	✓	✓
CIMPULSE™ 45MP	Yes	Moderate	✓	✓	✓	✓		✓