



**Henkel –
Your worldwide partner**

Machining & Grinding Fluids for Aerospace

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Machining & Grinding Fluids



MACHINING & GRINDING FLUIDS	Non-Returnable Tote	Drum	Pail	Aluminum	Stainless Steel	Titanium	Ferrous	Non-Ferrous	Consistency	Form	How to Apply	Mix Ratio (product:water)	Chemistry	Temperature	Time	Description	
	Product	Container Size			Substrate				Characteristics				Operation		Description		
COOLANTS – BIOSTABLE																	
Multan® 3105™	•	•	•	ABC	AB	AB	AB	ABC	Liquid	Concentrate	Circulation to Machine	5%-10% in Water	Synthetic	60°-100°F 15°-40°C	Continuous Flow to Cutting Area	Multan® 3105™ is an oil rejecting, synthetic fluid for heavy machining and grinding of ferrous and non-ferrous substrates. It is suitable also for copper and other exotic alloys. It is highly preferred on aluminum, titanium and inconel machining.	
Multan® 5500™	•	•	•	BC	ABC	ABC	ABC	—	Liquid	Concentrate	Circulation to Machine	5%-10% in Water	Synthetic	60°-100°F 15°-40°C	Continuous Flow to Cutting Area	Multan® 5500™ is an oil absorbing, true solution, synthetic fluid for moderate machining and grinding of ferrous and most aluminum alloys. Its low foam characteristics make it usable in high pressure applications, such as gundrilling.	
Multan® B 236™	•	•	•	AB	A	A	AB	AB	Liquid	Concentrate	Circulation to Machine	6%-10% in Water	Semi-synthetic	60°-100°F 15°-40°C	Continuous Flow to Cutting Area	Multan® B 236™ is a NEW low oil, bio-resistant semi-synthetic cutting fluid designed for light to moderate machining and grinding of ferrous and non-ferrous alloys. It is designed for use in areas where soft water or process requirements make foam difficult to control. Its combination of lubricity additives and cooling ability allow it to work in light to moderate applications.	
Multan® B-400™	•	•	•	ABC	ABC	ABC	ABC	ABC	Liquid	Concentrate	Circulation to Machine	6%-10% in Water	Semi-synthetic	60°-100°F 15°-40°C	Continuous Flow to Cutting Area	Multan® B-400™ is a bio-resistant, semi-synthetic cutting fluid applicable on most substrates. Its unique lubrication and EP package make it highly suitable for light to heavy metal removal operations. Its high characteristic level of cleanliness and wetting keep tooling clean and sharp to improve and maintain tool life. Multan® B-400™ has been certified by an independent lab to be mycobacterium resistant.	
Multan® B 414™	•	•	•	AB	A	A	AB	AB	Liquid	Concentrate	Circulation to Machine	6%-10% in Water	Semi-synthetic	60°-100°F 15°-40°C	Continuous Flow to Cutting Area	Multan® B 414™ is a NEW bio-resistant water soluble, semi-synthetic fluid designed for machining and grinding ferrous and non-ferrous alloys. It is designed for use in areas where soft water or process requirements make foam difficult to control. Its wide applicability makes it suitable for use on brass, copper and other exotic metals. Due to its versatility, this product can replace many different product types in a location to provide one universal material.	
Multan® B-451™	•	•	•	ABC	ABC	ABC	ABC	ABC	Liquid	Concentrate	Circulation to Machine	6%-10% in Water	Semi-synthetic	60°-100°F 15°-40°C	Continuous Flow to Cutting Area	Multan® B-451™ is a bio-resistant, high EP semi-synthetic fluid suitable for use on most substrates. Its unique lubrication and EP package make it highly suitable for heavy metal removal operations and harder to machine alloys, such as inconel. Multan® B-451™ has been certified by an independent lab to be mycobacterium resistant.	
Multan® CR 26™	•	•	•	AB	AB	AB	ABC	AB	Liquid	Concentrate	Circulation to Machine	100%	Straight Oil	60°-100°F 15°-40°C	Continuous Flow to Cutting Area	Multan® CR 26™ is a medium viscosity, straight cutting oil for use in multi-metal applications. Its high EP level makes it especially suitable for broaching applications.	

Machine & Grinding Applications
A - Highly Recommended For Grinding
B - Highly Recommended For General Machining - Turning, Drilling, Milling, Reaming, Sawing, Cutting
C - Highly Recommended For Heavy Machining - Threading, Broaching, Deep Hole Drilling, Reaming

Metal Removal

Henkel's line of high-quality Multan® metal removal products for cutting and grinding are available in a variety of chemistries including straight oils, soluble oils, semi-synthetics or synthetics.

Benefits

Henkel's metalworking brand, Multan®, continues to provide the aerospace, industry with cleaner, longer-lasting and highly efficient products.

Increased Productivity

Benefits

- Decreased overall operating expenses
- Increased plant profitability
- Increased operation time

Case Study

Improved grinding wheel life through a technology-based approach for a steel bearing manufacturer.

Result

- 25% reduction in wheel dressing
- 20% reduction in coolant consumption

Improved Quality

Benefits

- Machine interiors and tool pieces are kept clean
- Reduced scrap
- Improved microfinish on final parts
- Increased tool life

Case Study

Created higher tool life by switching to a higher performing chemistry.

Result

- Lower heat stress on tooling, 25% increase in tool life
- Over \$80,000 savings in tooling and chemicals consumed

Safe Products for Environment/Operators

Benefits

- Products designed for longer sump life
- Reduced operator exposure
- Offered safer ways to use chemistries

Case Study

Converted a conventional coolant used by an aviation engine manufacturer to a bio-resistant technology.

Result

- 80% waste reduction
- 50% reduction in coolant purchases

