

# METALWORKING FLUIDS

In the PETROFER portfolio you will find water-miscible and non-miscible products. Read more about our oils and grinding fluids.



**PETROFER**  
industrial oils and chemicals

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WATER SOLUBLE  
METALWORKING FLUIDS

# METALWORKING FLUIDS



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# A WATER SOLUBLE METALWORKING FLUIDS

ISOCOOL – Long-term stable, mineral oil free, water soluble multi-purpose metalworking fluids for general machining and grinding operations on ferrous and partially nonferrous metals. ISOGRIND – Long-term stable, mineral oil free, water soluble metalworking fluids with excellent wetting and rinsing properties for most grinding processes.

	PROPERTIES					MATERIALS					
	Mineral oil content in %	Ester	pH 5 % in 357 ppm hardness water	Corrosion protection Degree of corrosion: 0 at %	Make-up water hardness range in ppm	Cast iron, steel	Aluminium	Yellow metals	Performance rating	Free from FRB	Boron free
<b>ISOCOOL 1000 BF</b> Grinding of cast iron and steel, provides excellent anti-corrosion properties, especially developed for the bearing industry, long-term pH stability.	0	✗	9,9*	3%	>= 60	+			1	✓	✓
<b>ISOCOOL 1020 BF</b> Multi-purpose metalworking fluid for grinding and general to medium duty machining of steel and cast iron, especially developed for the bearing industry, long-term pH stability.	0	✗	9,6	4%	>= 60	+			7	✓	✓
<b>ISOGRIND A 58</b> Metalworking fluid for carbide tool grinding with high cobalt inhibitor content.	0	✗	9,3	5%	>= 60			++	4	✗	✓
<b>ISOGRIND A 1000</b> Metalworking fluid for carbide tool grinding with high inhibitor content, long-term pH stability.	0	✗	9,4	3%	>= 60			++	4	✓	✓
<b>ISOGRIND 130</b> Multi-purpose metalworking fluid for grinding and general to medium duty machining of steel and cast iron, suitable for make-up water of high hardness.	0	✗	9,4	3%	60-360	+			3	✗	✗

++ excellent suitability    + good suitability    ■ suitable    ■ limited suitability    ■ not suitable

Latest PETROFER Metalworking Fluid Technology

FRB: Formaldehyde releasing biocide

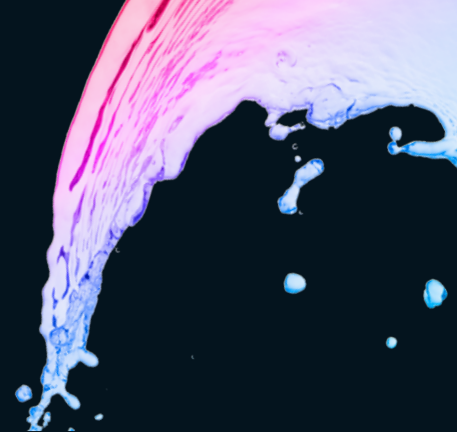
Performance rating: The performance rating ranges from minimum 1 to maximum 10 and is derived from the lubricity performance compared to other products

\* pH adjusts: The pH adjusts to the given range within 24 - 72 h, depending on make-up water quality and machining operation.

Freshly prepared emulsions or solutions show a higher pH for a short term, providing additional system protection at first fill.



	PROPERTIES						MATERIALS				
	Mineral oil content in %	Ester	pH 5 % in 357 ppm hardness water	Corrosion protection Degree of corrosion: 0 at %	Make-up water hardness range in ppm	Cast iron, steel	Aluminium	Yellow metals	Performance rating	Free from FFB	Boron free
<b>EMULCUT 100</b> Multi-purpose metalworking fluid for general to heavy duty machining of steel, cast iron and aluminium, long-term pH stability, not suitable for make-up water of high hardness.	51	✓	9,2-9,6*	3%	90-180	++	+		6	✗	✓
<b>EMULCUT 116</b> Multi-purpose metalworking fluid for grinding and general to heavy duty machining of steel, cast iron and aluminium, long-term pH stability, high lubricity, soft & hard water version available.	32	✓	9,2-9,5*	4%	140-360	++	+		8	✓	✓
<b>EMULCUT 135 E</b> High-performance metalworking fluid for general to extreme heavy duty machining of steel, cast iron and aluminium with outstanding lubricity.	0	✓	9,5	5%	180-360	++	++		10	✓	✓
<b>EMULCUT 4021</b> Multi-purpose metalworking fluid for grinding and general to medium duty machining of steel and cast iron, long-term pH stability.	20	✗	9,4-9,6*	3%	140-360	+			3	✓	✓
<b>EMULCUT 2020</b> Multi-purpose metalworking fluid for grinding and general to medium duty machining of steel and cast iron.	19	✓	9,3	4%	180-450	+	+		5	✓	✓
<b>EMULCUT 2500</b> Multi-purpose metalworking fluid for grinding and general to heavy duty machining of steel, cast iron and aluminium, high lubricity.	34	✓	9,2	4%	180-360	++	++		8	✗	✓
<b>EMULCUT 3400 F</b> Multi-purpose metalworking fluid for grinding and general to heavy duty machining of steel, cast iron and aluminium, high lubricity.	32	✓	9,3	4%	180-360	++	++		8	✓	✓
<b>EMULCUT 5020</b> Multi-purpose metalworking fluid for grinding and general machining of steel and cast iron.	17	✗	9,3	4%	180-360	+			2	✗	✓



	PROPERTIES						MATERIALS				
	Mineral oil content in %	Ester	pH 5 % in 357 ppm hardness water	Corrosion protection Degree of corrosion: 0 at %	Make-up water hardness range in ppm	Cast iron, steel	Aluminium	Yellow metals	Performance rating	Free from FRB	Boron free

## FREE OF BORON AND AMINES

<b>EMULCUT 6501M</b> Boron and amine free multi-purpose metalworking fluid for machining of yellow metals, steel, cast iron and aluminium.	47	✓	9,3	5 %	90-360	+	+	++	5	✓	✓
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## BORON CONTAINING

<b>ISOPAL 4035</b> Multi-purpose metalworking fluid for grinding and general to heavy duty machining of steel, cast iron, aluminium and yellow metals, high pH stability, excellent rinsing properties.	25	✓	9,4	3 %	90-540	++	+		6	✗	✗
<b>ISOPAL 6022</b> Multi-purpose metalworking fluid for grinding and general to medium duty machining of steel and cast iron, high pH stability, excellent rinsing properties.	20	✗	9,5	3 %	90-540	+			3	✗	✗

## 2-COMPONENT SYSTEM

<b>EMULCUT DUO SBF</b> Additive package of the 2-component system Emulcut DUO BF.	0	✗	9,7	1 %	90-360				1	✓	✓
<b>EMULCUT DUO BBF</b> Lubricity package of the 2-component system Emulcut DUO BF.	0	✓			90-360	++	++		9	✓	✓