

ECOCOOL / ECO CUT

Water-miscible and Neat Cutting Fluids



MOVING YOUR WORLD

LUBRICANTS.
TECHNOLOGY.
PEOPLE.



FUCHS LUBRICANTS SOUTH AFRICA

We do not just develop lubricants. We develop intelligent solutions for highly complex challenges.

Drawing on decades of global expertise and deep local insight, we combine the strength of the international FUCHS Group with the specialised knowledge required for South Africa's diverse sectors, from mining and manufacturing to automotive, food processing, energy, and agriculture. Our goal is to keep our customers' world in motion. Efficient, sustainable, reliable. Today and tomorrow.

What can we move for you?

FUCHS LUBRICANTS SOUTH AFRICA

Facts and figures

Company: FUCHS LUBRICANTS SOUTH AFRICA (Pty) Ltd, a proud member of the globally recognised FUCHS Group

Local presence: Head office in Isando, Gauteng with regional branches in Cape Town, Durban, Gqeberha, Kuruman, Emalahleni and Springbok

Team Strength: 1,400+ international specialists supported by a skilled and growing South African technical and sales team

Product Offering: A comprehensive local portfolio, drawing from a global range of over 3,000 high-performance lubricants and related specialties

Certifications i. a.: ISO 9001, IATF 16949, ISO 14001, ISO 45001, ISO 50001, ISO 21469

Sustainability: Globally CO2-neutral production at all manufacturing sites since 2020*

FUCHS LUBRICANTS SOUTH AFRICA - Locally rooted. Globally connected.

FUCHS LUBRICANTS SOUTH AFRICA delivers world-class lubrication solutions designed to meet the demands of Southern Africa's key industries – from mining and agriculture to transport, food production and automotive workshops. With the full support of FUCHS Group's global R&D, we develop and supply tailored lubricants that enhance equipment performance, extend service life and reduce downtime.

Whether in harsh mining environments, critical manufacturing processes or daily vehicle maintenance, FUCHS is committed to keeping your world in motion – efficiently, sustainably, reliably.

Our Strengths: Technical Expertise, Local Support, Global Innovation.

With deep technical expertise and one of the most extensive national networks of sales and technical support, FUCHS LUBRICANTS SOUTH AFRICA is your trusted partner on the ground.

We offer:

- A full product portfolio for all sectors, supported by advanced German engineering.
- Smart Services and digital tools to simplify lubricant monitoring and management.
- In-house technical support, oil analysis and customer training for optimised operations.
- Proven performance across industries: automotive OEMs and aftermarket, mining and exploration, agriculture, manufacturing, food processing, energy, steel, paper and more.

Through continuous innovation and uncompromising quality, FUCHS lubricants reduce wear, energy usage and maintenance costs - keeping your machines, fleets and production lines moving.

WATER-MISCIBLE CUTTING FLUIDS FOR METALWORKING OPERATIONS

In modern manufacturing, the demands placed on cutting fluids have increased significantly. Within the Industry 4.0 environment, people, machines, logistics and cutting fluids are connected across the entire value chain to support smarter and more efficient production. With the help of advanced IT and communication technologies, these systems work together to enable improved monitoring and largely self-optimised processes.

For this to be effective, cutting fluid data must be available online, analysed in real time and adjusted when necessary. Achieving accurate analysis requires cutting fluids with high stability and consistent performance. This is especially important in the diverse and demanding operating conditions found in South African industries.

Safe, economical and sustainable in use

FUCHS is the specialist for metalworking operations. Our water-miscible cutting fluids are safe and reliable and fulfil all legislative requirements so that their use can be judged to be almost risk-free. The sustainability of our ECOCOOL products was factored into their formulation. FUCHS cutting fluids thus offer long service life even in boron-free versions.

FUCHS cutting fluids are:

- Free of nitrosamine-forming secondary amines
- Free of nitrite
- Free of hard complexing agents
- Skin compatible
- Free of chlorine, zinc and heavy metals
- Sustainable
- Economical

This means more than just workshop safety for ECOCOOL users. ECOCOOL lubricants are also extraordinarily long-life and economical. This lowers operating, maintenance and disposal costs. In addition, the carefully selected ingredients increase skin compatibility even at high pH values.

Optimum technical properties

FUCHS cutting fluids fulfil the technical requirements and make machining operations more efficient. ECOCOOL products guarantee:

- Optimum cooling and flushing
- Outstanding lubricity
- Excellent wear protection
- Effective corrosion protection
- Low foaming
- Good material compatibility
- Good results with innovative materials
- Excellent EP properties

For the ECOCOOL user, this means more process reliability, more effective and efficient staging and less expensive machine down time.

Available throughout the world

Our customers are located throughout the world and our cutting fluids are available where they are. This means that all raw materials must be registered and comply with chemical regulations in the respective countries. FUCHS offers water-miscible cutting fluids under the name ECOCOOL GLOBAL which can be manufactured anywhere in the world with the same formulation. This allows users to pursue globally-harmonized manufacturing processes with the same fluids.

New cutting fluids with future perspectives

Current discussions about the ingredients in cutting fluids such as boric acid, formaldehyde-releasing substances (FAD), dicyclohexylamine (DCHA) and 2-aminoethanol (MEA) make cutting fluid risk assessments as part of health and safety at work difficult. The demand for high-performance cutting fluids which do not contain risky ingredients is high.

New and future generations of ECOCOOL cutting fluids satisfy today's legislative requirements and also those issues currently being discussed. These demand that cutting fluids should be:

- Free of boron
- Free of formaldehyde-releasing agents
- Free of 2-aminoethanol (MEA)
- Free of dicyclohexylamine (DCHA)

Moreover, ECOCOOL products offer the usual high buffering of cutting fluids containing boron and are low odour both as concentrates and as ready-to-use emulsions.



New Synthetic Cutting Fluids Set New Standards

The new ECOCOOL S series of synthetic, high-performance cutting fluids are an alternative to oil-based products. Intelligent combinations of corrosion preventives and polymers have given them the performance levels of oil-based cutting fluids and thus significantly broadened their application spectrum. These new synthetic products also show their strengths in extreme conditions and can not only be used for staining-prone aluminium alloys but also for ferrous materials with almost no foaming.

Whereas in the past, oily residues had to be removed from machined components by washing, in most cases this cost-intensive operation is no longer necessary. Furthermore, the elastomer compatibility and the poor corrosion protection offered by conventional synthetic cutting fluids were improved by the use of oil-like polymers.

Practical application experience confirms the strengths of the ECOCOOL S series:

- Good corrosion protection
- Absolutely low-foaming
- Leave no sticky residues
- Outstanding wetting and flushing
- Good lubricity

And thus in practice offers

- High process reliability
- Excellent economy

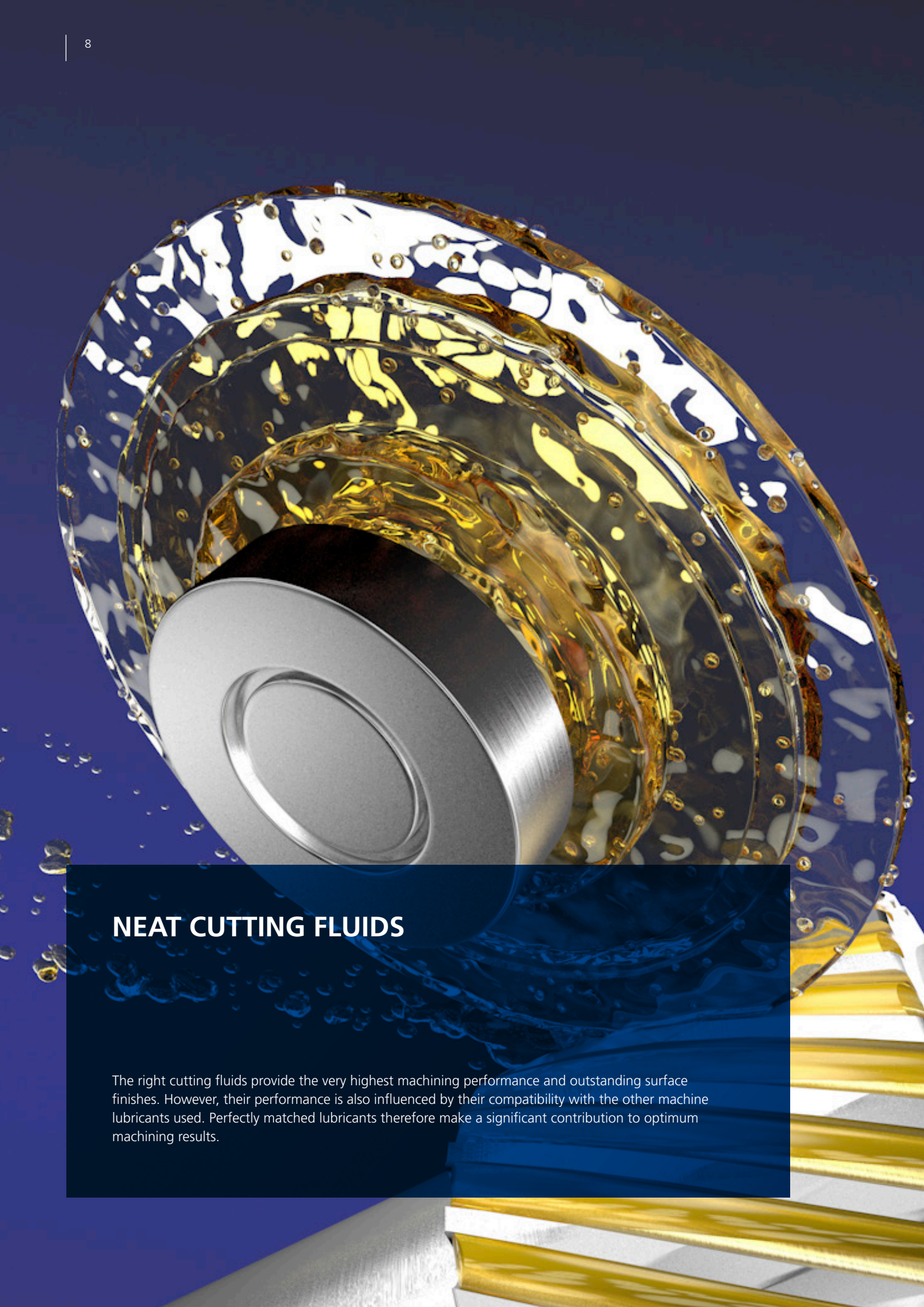
The water-miscible cutting fluid world is changing and will need vision and courage to introduce reforms. Exploit the benefits of FUCHS ECOCOOL lubricants for your manufacturing processes.

Water-Miscible Cutting Fluids – DCHA (Dicyclohexylamine)-free, Formaldehyde Depot-free Selection Assistance and Details

Product	Emulsion type	Boron free	Mono ethanol aminefree	Cast iron	Steel	Aluminium Si 7-12	Aluminium Si 0,5-1	Non-ferrous metals	Special-materials	Mixing water °dH
Fully-synthetic products of the new generation										
ECOCOOL S-CP	Solution	x	—	●●●	●●●	●	○	○	○	0-20
ECOCOOL S-GFC	Solution	x	—	●●●	●●	○	○	○	○	0-20
ECOCOOL GLOBAL S-240	Solution	x	x	●	○	○	○	○	●●● Reinforced composites	0-20
ECOCOOL S-CO 5 BF	Solution Amine- free	x	x	○	○	○	○	●	●●● Tungsten carbides	10-20
ECOCOOL S-G2	Solution	x	x	○	●●	●●●	●	○	●●● Aero Al, Galvanized materials	0-20
ECOCOOL CGF	Solution	—	—	●●●	●●●	○	○	○	○	
Boron containing semi-synthetic products										
ECOCOOL R-VH-CM	Micro emulsion	—	—	●●●	●●	●	○	○	○	10-20
ECOCOOL R-2030	Conventional emulsion	—	—	●●	●●●	●●●	●	○	○	5-20
ECOCOOL R-GRINDSTAR	Micro emulsion	—	—	●●●	●●	●	—	—		2-15
Boron-free semi-synthetic products										
ECOCOOL FERROSTAR MBF	Micro emulsion	x	x	●●●	●●●	●●	●	○	○	5-20
ECOCOOL HPL 720 GT	Conventional emulsion	x	x	—	●●●	●●●	●●●	●		5-20
ECOCOOL 2516 MG-DC	Conventional emulsion	x	x	○	●●	●●	●●	○	●●● Mg	15-200
ECOCOOL VHCM-1K	Micro emulsion	x	—	●●●	●●	●	○	○	○	5-20
ECOCOOL AFC 1515	Conventional emulsion	x	x	●●	●●●	●●●	●●	○	●● Ti-Cr-Ni	5-20
ECOCOOL GT 7x4	Conventional emulsion	x	x	○	●●●	●●●	●●●	●	●●● Ti-Cr-Ni alloys, Aero Al	5-20
ECOCOOL 600 NBF C	Micro emulsion	—	—	●●●	●●●	○	○	●	○	
ECOCOOL GLOBAL 1000	Micro emulsion	x	—	○	●●●	○	○	●●●	●●● Ti-Ni alloys	
Mineral based products										
ECOCOOL BS 2	Macro Emulsion	—	—	●●●	●●●	○	○	●●●	○	

○ Limited suitability ● Suitable ●● Highly suitable ●●● Perfectly suitable — no x yes

Further products on request



NEAT CUTTING FLUIDS

The right cutting fluids provide the very highest machining performance and outstanding surface finishes. However, their performance is also influenced by their compatibility with the other machine lubricants used. Perfectly matched lubricants therefore make a significant contribution to optimum machining results.

Increasing productivity while doing justice to increasing ecological and economic considerations is the key to maintaining international competitiveness in the metalworking industry. Cost analyses have shown that cutting fluids account for a significant proportion of total manufacturing costs.

FUCHS ECOCUT and PLANTOCUT neat metalworking fluids are formulated in line with the very latest findings. FUCHS supports its customers with far-reaching research and development activities and by directly including expertise from practical trials in new neat cutting fluids.

ECOCUT and PLANTOCUT cutting fluids meet all current legislative requirements and fulfil all demands to guarantee efficient and cost-effective metalworking.

They offer

- **Good cooling**
- **High lubricity**
- **Good flushing**
- **Active improvements to machining performance**
- **Excellent environmental and health protection.**

The interaction between manufacturers, users, developers and researchers generates successful synergies and new product and process innovations which drive the development of advanced lubricants.



Expert consultation

Our team of skilled application engineers offers hands-on technical support, helping you choose the most suitable products and ensuring the right service for your operation. With their deep application knowledge, they work to streamline processes, extend tool life and enhance overall production efficiency.

Global consistency

As metalworking requirements evolve across industries worldwide, cutting fluid technology must keep pace. Through the strength of the FUCHS global network, we ensure that selected products are available internationally with the same dependable quality, performance and formulation standards.

Industry-specific solutions

Specialised solutions for demanding applications. We provide cutting fluid technologies developed for industries that require exceptional performance and reliability. These applications often involve materials that place very high demands on lubricity, stability and compatibility. Our specially tested, non-cytotoxic formulations are designed to meet these requirements, ensuring clean machining, consistent results and dependable process performance.

The ideal solution

FUCHS provides a suitable cutting fluid for almost every machining process in the metalworking industry. Contact us and our team will gladly help you choose the product that best fits your needs.

Special Product Solutions: Low-Emission Cutting and Grinding Oils



Better for People, Better for Companies

FUCHS low-emission oils are designed to address the challenges often seen with traditional cutting oils, especially those prone to heavy misting and evaporation. Our proven high-performance low-emission range delivers strong economic benefits while helping reduce overall emissions in the workplace.

In machining operations such as grinding, turning, milling, thread cutting, deep hole drilling and reaming, some level of mist or vapour release is almost unavoidable. To minimise this, our research and development laboratories use advanced additive technology to create oils that produce far less mist and show significantly reduced evaporation. Carefully selected base oils also contribute to lowering vapour formation.

Because vapours are not usually captured by standard separators, they can remain in the workshop environment when no extraction system is installed. By reducing mist and vapour at the source, our low-emission products support cleaner, safer and more efficient working conditions.

The low-emission ECOCUT and PLANTOCUT series of products offer double safety: they keep the air in workshops clean and they reduce fire and explosion hazards in line with BGI/GUV-I 719.

The resulting benefits are:

- **Better workshop air improves health and safety**
- **Reduced fire and explosion hazards**
- **Extended service intervals for oil separators**
- **Lower consumption.**

ECOCUT LE: Formulated with HC base oils

ECOCUT FT: Formulated with GTL base oils

PLANTOCUT: Formulated with synthetic esters

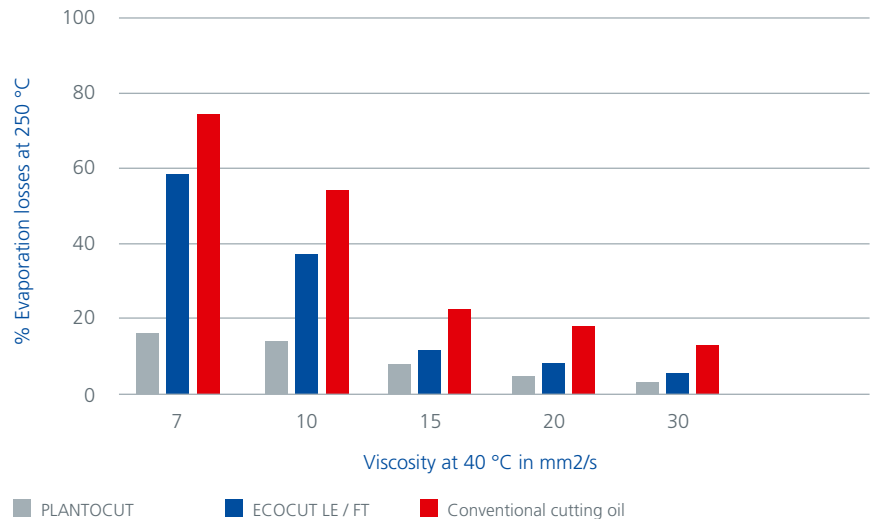
Our application engineers will be glad to be of assistance.

Fundamentally rational

They do not just fulfil all technical requirements. Their outstanding properties make the use of ECOCUT and PLANTOCUT cutting and grinding oils especially economical because they offer:

- Low consumption
- Good cooling
- Good flushing
- High lubricity
- Longer tool life

Evaporation losses of various base oils / Typical values



Reduction of cutting fluid fire and explosion hazards according to BGI / GUV-I 719

Tendency	Viscosity grade according to DIN 51519 (ISO 3448:1992)	Viscosity at 40 °C according to DIN 51562 [mm²/s]	Flashpoint according to ISO 2592 (Cleveland open cup) [°C]	Evaporation losses at 250 °C according to DIN 51581-1 and 2 (Noack method) [%]	Machining examples
Declining fire and explosion hazards	ISO VG 5	4,14–5,06	> 120	< 85	Honing Reaming Grinding Deep hole drilling Turning Milling Drilling Thread cutting Thread rolling Broaching
	ISO VG 7	6,12–7,48	> 145	< 80	
	ISO VG 10	9,00–11,00	> 155	< 60	
	ISO VG 15	13,50–16,50	> 190	< 25	
	ISO VG 22	19,80–24,20	> 200	< 15	
	ISO VG 32	28,80–35,20	> 219	< 13	
	ISO VG 46	41,40–50,60	> 220	< 11	

Source: BGI/GUV-I 719

Neat Cutting Fluids – Selection Assistance

Material/ Process	Normal machining steels	Difficult- tomachine steels	Very-difficult- tomachine steels	Titanium and titanium alloys	Cast iron and malleable cast iron	Nonferrous metals	Aluminium and aluminium alloys
Machining centers	ECOCUT HFN LE-Series FT-Series	ECOCUT 600 LE-Series FT-Series	ECOCUT 700 LE-Series FT-Series	ECOCUT 7520 LE-M FT-Series PLANTOCUT-Series	ECOCUT HFN LE-Series	ECOCUT HFN LE-Series FT-Series PLANTOCUT-Series	ECOCUT HFN LE-Series FT-Series
Deep hole drilling	ECOCUT 515 FT-Series PLANTOCUTSeries ECOCUT 610	ECOCUT 515 ECOCUT MXB 18 FT-Series ECOCUT 610	ECOCUT 515 ECOCUT MXB 18 FT-Series ECOCUT 610	ECOCUT 7520 LE-S 1 FT-Series	ECOCUT HFN LE-Series 600 LE-Series ECOCUT 610	ECOCUT HFN LE-Series FT-Series PLANTOCUT-Series	ECOCUT HFN LE-Series PLANTOCUTSeries ECOCUT 610
Broaching	ECOCUT 600 LE-Series ECOCUT 732	ECOCUT 700 LE-Series ECOCUT 732	ECOCUT 800-Series 8536 S	ECOCUT 800-Series	ECOCUT HFN LE-Series	ECOCUT HFN LE-Series PLANTOCUTSeries	ECOCUT HFN LE-Series PLANTOCUTSeries
Gear cutting	ECOCUT HFN LE-Series 600 LE-Series	ECOCUT HFN LE-Series 600 LE-Series 700 LE-Series	ECOCUT 8532	–	–	ECOCUT HFN LE-Series	–
Honing / Finishing	ECOCUT GBS 5 PLANTOCUTSeries	ECOCUT GBS 5 PLANTOCUTSeries	ECOCUT HFN 5 LE UNI PLANTOCUTSeries	ECOCUT HFN 5 LE UNI PLANTOCUTSeries	ECOCUT GBS 5 HFN LE-Series	ECOCUT HFN LE-Series	ECOCUT HFN LE-Series
Lapping	ECOCUT HO 74	ECOCUT HO 74	ECOCUT HO 74	–	ECOCUT HO 74	ECOCUT HO 74	ECOCUT HO 74
Grinding	ECOCUT HFN LE-Series FT-Series HSG 2005 S ECOCUT HFN 13 LE UNI	ECOCUT HFN LE-Series FT-Series HSG LE-Series ECOCUT HFN 13 LE UNI	ECOCUT HSG LE-Series FT-Series	PLANTOCUT- Series	ECOCUT HFN LE-Series FT-Series ECOCUT HFN 13 LE UNI	ECOCUT HFN LE-Series FT-Series ECOCUT HFN 13 LE UNI	ECOCUT HFN LE-Series FT-Series
Thread cutting	ECOCUT 500 LE-Series FT-Series PLANTO- CUTSeries ECOCUT W SC 3	ECOCUT 500 LE-Series 700 LE-Series FT-Series ECOCUT W SC 3	ECOCUT 500 LE-Series 700 LE-Series FT-Series 8536 S ECOCUT W SC 3	ECOCUT 7520 LE-M FT-Series PLANTOCUTSeries	ECOCUT HFN LE-Series PLANTOCUTSeries	ECOCUT HFN LE-Series PLANTOCUTSeries ECOCUT W SC 3	ECOCUT HFN LE-Series PLANTOCUTSeries
Spark erosion	ECOCUT 1520 ECOCUT FE	ECOCUT 1520 ECOCUT FE	ECOCUT 1520 ECOCUT FE	ECOCUT 1520 ECOCUT FE	ECOCUT 1520 ECOCUT FE	–	–
Minimum Quantity Lubrication	ECOCUT MIKRO PLUSSeries	PLANTO MIKRO-Series	PLANTO MIKRO-Series	PLANTO MIKRO-Series	ECOCUT MIKRO PLUSSeries	ECOCUT MIKRO PLUSSeries	ECOCUT MIKRO PLUSSeries
Tapping	ECOCUT SC 14 ECOCUT W SC 3 ECOCUT CENTAP UNIVERSAL	ECOCUT SC 14 ECOCUT W SC 3	ECOCUT SC 14 ECOCUT W SC 3	ECOCUT SC 14	ECOCUT SC 14	ECOCUT SC 14 ECOCUT W SC 3	-
Minimum Quantity Lubrication	ECOCUT MIKRO PLUS- Series	PLANTO MIKRO-Series	PLANTO MIKRO-Series	PLANTO MIKRO-Series	ECOCUT MIKRO PLUS- Series	ECOCUT MIKRO PLUS- Series	ECOCUT MIKRO PLUS- Series

The products in a series are available in different viscosities.

Note

The information contained in this product information is based on the experience and know-how of FUCHS LUBRICANTS South Africa in the development and manufacturing of lubricants and represents the current state-of-the-art. The performance of our products can be influenced by a series of factors, especially the specific use, the method of application, the operational environment, component pre-treatment, possible external contamination, etc. For this reason, universally-valid statements about the function of our products are not possible.

Our products must not be used in aircraft or spacecraft. Our products may be used in the manufacture of components for aircraft or spacecraft if they are removed without residue from the components prior to assembly into the aircraft or spacecraft.

The information given in this product information represents general, non-binding guidelines. No warranty expressed or implied is given concerning the properties of the product or its suitability for any given application. We therefore recommend that you consult a FUCHS LUBRICANTS South Africa application engineer to discuss application conditions and the performance criteria of the products before the product is used. It is the responsibility of the user to test the functional suitability of the product and to use it with the corresponding care. Our products undergo continuous improvement. We therefore retain the right to change our product program, the products, and their manufacturing processes as well as all details of our product information sheets at any time and without warning, unless otherwise provided in customer-specific agreements. With the publication of this product information, all previous editions cease to be valid. Any form of reproduction requires express prior written permission from FUCHS LUBRICANTS South Africa.

Complete Solutions for all your Manufacturing Processes

With system solutions from FUCHS, the world's largest independent manufacturer of lubricants with the most extensive program of metalworking fluids, you have chosen an absolute specialist. And thus benefit from all the knowhow, years of application engineering experience and customized solutions.

Example: Manufacturing gearboxes.



ECOCOOL

MACHINING: WM*

- " High performance
- " Economical
- " Outstanding lubricity



ECOCUT

MACHINING: NEAT

- " Increased reliability
- " Economical
- " Low misting and low evaporation



RENOQUENCH

QUENCHING

- " Low distortion
- " Low consumption
- " Good compatibility



RENOCLEAN

CLEANING

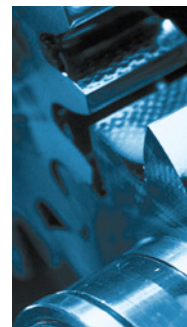
- " Highly effective
- " Unproblematic processes
- " Outstanding emulsification and demulsification



RENOLIT

LUBRICATION: GREASES

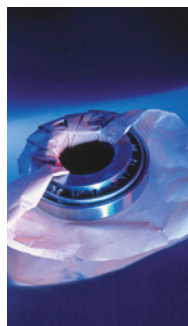
- " Compatible
- " Long-term and life-long lubrication
- " Optimum compatibility with



RENOLIN

LUBRICATION: OILS

- " Compatible
- " Excellent corrosion protection
- " Optimum wear protection



ANTICORIT

PROTECTION

- " Optimum protection
- " Clean application



CPM

FLUID MANAGEMENT

- " For all fluids
- " Auditable documentation
- " Better performance
- " High process reliability
- " Cost reductions

FUCHS x DMG MORI

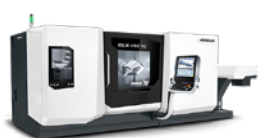
FUCHS and DMG MORI have joined forces – and for you, that means more. More performance and more sustainability. Because every fluid in your machine is now tailor-made and perfectly matched.

Whether it's accuracy, the optimization of your total cost of ownership, an ultra-high vacuum environment or process stability – we have the right combination of lubricants and services to meet your challenges.

All of these holistic solutions come to you through a secure supply chain. You can rely on it threefold – globally, locally and in the future.



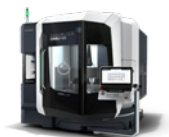
First Fill and Maintenance



CLX 450 TC



DMV 110



DMU 65 monoBLOCK 2. Gen.

RENEP CGLP 68	■		
RENOLIN B10 VG 32	■		
RENOLIN CLP 150	■	■	■
RENOLIN MPG 5 MIX 30 IDM *	■		■
RENOLIN ZAF D 46 HT		■	■
RENOLIN ZAF D 22 HT		■	
RENOLIT LI IDM 000 *		■	■
RENOLIN FF68 Spindle Oil		■	■
RENOLIN MPG 5		■	
RENOLIN FF 68		■	

* IDM = Initiated by DMG MORI; products especially developed with DMG MORI based on the needs of DMG MORI's machines

Metal working fluids



PROCESS	MATERIAL	SOLUTION
Machining and Grinding	Aluminum Titanium Aerospace Medical Semiconductor	ECOCOOL GLOBAL 1000
Machining and Grinding	Aluminum Steel	ECOCOOL GLOBAL 20
Machining and Grinding	Multi-Metals	ECOCOOL MACH 300
Machining and Grinding	Steel Cast Iron	ECOCOOL FERROSTAR MBF

[illegible]

FUCHS LUBRICANTS SOUTH AFRICA

Innovative lubricants need experienced application engineers

Every lubricant change should be preceded by expert consultation on the application in question. Only then can the best lubricant system be selected. Experienced FUCHS engineers will be happy to advise on products for the application in question and also on our full range of lubricants.

Contact:



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