

Innovative Lubricants Need Experienced Application Engineers

Consultation with an experienced Application Engineer should precede every lubricant change-over. This guarantees that the optimum lubricant system is selected. Our experienced engineers can not only offer advice on application but also inform you about our comprehensive range of lubricants.



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Efficient Solutions for all Machining Operations



Cutting Fluid Specialties



FUCHS LUBRICANTS (INDIA) PVT. LTD

YOUR STRONG GLOBAL PARTNER FOR INDUSTRIAL LUBRICANTS



HOW WE EXCEL

FUCHS LUBRICANTS (INDIA) PVT LTD is a wholly owned subsidiary of the German Company, FUCHS PETROLUB AG, the World's largest independent lubricants manufacturer. It was founded in 1931 as RUDOLPH FUCHS. The group now has 54 operating companies worldwide manufacturing a comprehensive range of lubricants and derived specialties for a wide range of applications.

Our company's degree of specialisation and innovation is way above the industrial average in this field. The full product line includes almost 2,000 lubricants and derived specialties for all walks of life, industrial processes and applications. Our customer's success is also our success. Because partnership to us means passing-on benefits.

The advantage of a strong market presence: FUCHS is the largest independent manufacturer of lubricants in the world. The benefit of premium, innovative products from a full-line manufacturer: With a complete product line as well as tailor-made special solutions, FUCHS has a product for every application. The benefits of reliability: Certified according to DIN EN ISO 9001:2008 and ISO/TS 16949:2009, FUCHS has been continuously upgrading its highly specialised lubricants for decades.

And naturally, partnership for us also means providing our customers with competent support. With comprehensive marketing. With high-performance logistics. With the development of successful service concepts. And qualified consulting. Because together, we can achieve more.

WHAT INCREASES THE VALUE OF OUR PRODUCTS

We develop lubricants: application-specific and tailor-made for our customer's processes. Together we look for the best lubricants for our customers. This cooperation is unique in terms of its form, scope and intensity. **We call it development partnership.** The success of our development partnerships is based on an important fact: FUCHS is not one of the oil-giants.

FUCHS is a multinational, independent lubricant manufacturer. Our independence is the difference. We are open to new solutions, open for visions – the prerequisites for innovations. And innovation is the defining characteristic of FUCHS. 70 % of our products are less than five years old and the great majority of our products are individual solutions. Challenge us and see!



DIN EN ISO 9001:2008
ISO/TS 16949:2009
DIN EN ISO 14001:2004
REG.NR. 2476





Innovative Materials

In today's world of automotive manufacturing, cast iron is being increasingly replaced by lighter aluminium alloys and tungsten-coated tools offer greater economies in highly-developed machining processes. Products in the 21st century demand very close manufacturing tolerances and the shortest possible manufacturing times.

Advanced Products

FUCHS – the global leader in the field of specialty lubricants – offers innovative cutting fluids for sophisticated processes in automotive industries such as the machining of crankcases, crankshaft grinding or the honing of critical bearing surfaces.

FUCHS High-Tech Lubricants

Cutting fluids are highly-stressed in advanced and flexible production processes. Machining shops require products with a broad range of applications and differing functions for use in individually filled machines as well as central systems.

- **Material compatibility** – Suitable for a wide range of cast iron and steel, malleable aluminium alloys and diecast aluminium.
- **Water quality** – Users demand cutting fluids which can be used in different plant locations and with hard or soft water.
- **Process parameters** – Good flushing during grinding and the machining of cast iron, good lubricity during thread cutting and reliable corrosion protection
- **Monitoring** – Simple surveillance and few adjustments in individually-filled machines and central systems.

ECOCOOL 68 CF2 L

Watermiscible for machining steel and cast iron

ECOCOOL SOLUBLE 30*

Watermiscible for machining and grinding

ECOCOOL 4807

Watermiscible for aluminium

RATAK MEP

Watermiscible for multi-metal machining

ECOCOOL S SUP

Watermiscible synthetic fluid

ECOCUT HFN 10 LE

Low evaporation neat oil

ECOCUT 628

Heavy-duty neat oil

ECOCUT 715

Gun drilling and broaching oil

RENOCLEAN L 4160

Alkaline based cleaner for spray washers

Practical report/ case study

FUCHS offers the perfect solution for all your metalworking needs. ECOCOOL, ECOCUT & RATAK are the world's leading and most exhaustive range of high performance metalworking fluids from FUCHS. The ECOCOOL 68 CF2 L is a chlorine free product that has been specifically developed to suit the Indian condition. It is a versatile coolant suitable for multi-metal and multi-machining operation and can be offered as a rationalized product for varied applications in a machine shop and for centralized systems. The product is very bio-stable and offers excellent sump life. It also provides good corrosion protection for work-in-progress components and is safe to the operators and the environment. ECOCOOL 68 CF2 L is a proven product

under the most stringent conditions and offers a trouble free performance. The excellent performance characteristics of ECOCOOL 68 CF2 L help in overall cost savings in coolant consumption.

Customer experiences:

- **Excellent** – Machining performance
- **Unique** – Machine cleanliness
- **High** – Emulsion stability
- **Outstanding** – Corrosion protection
- **Pleasant** – Odour



Practical Application Recommendations.

Watermiscible	Type	pH @5% DW	Application (Operations & Materials)
ECOCOOL 68 CF2 L	Semi synthetic	9.2	Machining of steel and cast iron. Resistant to hard water ~ 600 ppm.
ECOCOOL SOLUBLE 30*	Semi synthetic	9.1	General machining, grinding of steel. Resistant to a water hardness ~ 600 ppm.
ECOCOOL 4807	Semi synthetic	8.8	General machining of aluminium. Works excellent for machining of pistons and rings.
RATAK MEP	Semi synthetic	8.9	Machining and grinding of aluminium, steel and stainless steel. Stable upto a hardness of 400 ppm.
ECOCOOL S SUP	Synthetic	9.4	Roll grinding and for normal steel and aluminium grinding application.
Neat oils	Flash Point °C	Kin. Viscosity cST @40°C	Application (Operations & Materials)
ECOCUT HFN 10 LE	> 150	9-11	Low misting, low evaporating multipurpose oils for cutting operations. Can also be used as rationalising product for hydraulic systems and general lubrication. Recommended for normal to difficult machining operations on ferrous and non-ferrous materials. Especially suitable for grinding and turning work-centers.
ECOCUT 628	> 160	27-30	Suitable for broaching, hobbing and threading application. Contains sulphur.
RATAK HFN 15 B	> 135	5-6	Recommended for honing and grinding; specially suitable for carbide grinding.
ECOCUT 715	> 140	12-14	Chlorine free sulphur containing low viscosity, highly active cutting oil for difficult machining. Recommended for broaching and gun drilling application.
Cleaner	Type	pH @5% DW	Application (Operations & Materials)
RENOCLEAN L 4160	Alkaline cleaner	11	Both for intermediate and final degreasing of steel components. Offers short term rust protection.

All-round Solutions for Your Manufacturing Process

The right cutting fluids offer the maximum machining performance and excellent surface finishes. But their performance is also influenced by their compatibility with other lubricants used.

Furthermore, the smooth and unproblematic completion of all processes in the manufacturing chain guarantees optimum manufacturing output. Fully compatible and well-matched lubricants are an

important factor. FUCHS, as the world's largest independent manufacturer of lubricants and the specialist for system solutions offers a complete line of metalworking fluids and lubricants.

And thus the specialist application know-how and the tailor-made solutions.

Example: Gearbox manufacturing



>> MACHINING: WATER-MISCIBLE



High-performance
Economical
Excellent lubricity

ECOCOOL

>> MACHINING: NEAT



Increased reliability
Low misting and low evaporation
Easily removable

ECOCUT

>> QUENCHING



Low warping
Low consumption
High compatibility

THERMISOL

>> FORMING



Compatible
Adhesive-compatible
Easily welded

RENOFORM

>> CLEANING



High cleansing effect
Problem-free processes
Excellent emulsifying and demulsifying

RENOCLEAN

>> LUBRICATING: GREASES



Compatible
Optimum compatibility with sealing materials
Lubricated-for-life applications

RENOLIT

>> LUBRICATING: OILS



Compatible
Good corrosion protection
Optimum wear protection

RENOLIN

>> PROTECTION



Optimum reliability
Clean applications
Environmentally harmless, no residues

ANTICORIT