MOTUL TECH

BIO-SOURCED MACHINING LUBRICANTS

MOTUL GREEN TECH

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Since 2010, the law on the French national commitment to the environment («Grenelle 2»), MotulTech has been conducting research to provide its customers with sustainable and environmentally friendly solutions**.**

MotulTech's R&D teams have developed a complete range of machining lubricants based on sustainable raw materials based on natural resources that can ultimately contribute to the improvement of the GHG emissions of the industrial manufacturing plants.

As part of an eco-responsible approach, these lubricants are not CLP-labeled thereby providing sustainable lubricants for manufacturing industry.

As the latest generation of alternatives to mineral oil based lubricants, they optimize the entire value chain of metal part manufacturing, particularly by reducing energy and maintenance costs.

With **MOTUL GREEN TECH**, the commitment is based on three fundamental pillars:

- Develop environmentally friendly products from **renewable** raw materials
- Provide performance to increase productivity and **reduce chemical consumption**
- Reduce **energy costs** related to the use of the products.

THE ADVANTAGES OF MOTUL GREEN TECH PRODUCTS

COMPLIANCE WITH THE MOST STRINGENT REGULATIONS

EXCELLENT LUBRICATING POWER ALLOWING LOWER CONSUMPTION.

VERY HIGH FLASH POINT TO LIMIT THE RISK OF FIRE

IMPROVED RESISTANCE TO OXIDATION

LESS TOXICITY

HIGH VISCOSITY INDEX FOR BETTER THERMAL STABILITY OF LUBRICANTS UNDER HIGH STRESS

NEAT MACHINING OILS

SUPRACUT INO GV

LATEST GENERATION OF VEGETABLE ESTERS

Traditional ester-based lubricants, which have been in the market for years, despite the advantages derived from the absence of mineral oil, often have problems of thermal oxydation stability resulting in the chronic formation of varnishes and residues in the machine tools.

SUPRACUT INO GV benefits from the latest advantages in antioxidant additives for longer life and better stability at high temperatures.

MotulTech R&D team carried out extensive research on lubricant additives used in conventional products to understand their impact on stability and performance. The formulation chosen for **SUPRACUT INO GV** is therefore optimized to prolong the life of the tools under severe work conditions.

The combination of natural esters and carefully selected performance additives offers the advantage of high flash point and consistent lubrication characteristics which are difficult to obtain with other base oils available on the market.

KEY BENEFITS

- Non labeled neat oils, even at low viscosity
- Absence of T.L.V. (Threshold Limit Value)
- Extended tool life
- High reduction of mists and fumes during use
- Excellent surface finish
- Reduced energy and oil consumption

SOLUBLE MACHINING FLUIDS

SAFKOOL GV

PERFORMANCE & SAFETY

SAFKOOL GV range is formulated with the aim of ensuring safe working conditions and a lower impact on the environment, inspired by the MoVaRisCh - chemical agent risk assessment model for SMEs.

SAFKOOL GV presents a high bio-stability, even with prolonged use of the emulsion.

This range covers all types of operations for machining.

KEY BENEFITS

- Extended tool life
- High reduction of mists and fumes during its use
- Excellent surface finish
- Reduced energy and oil consumption
- Absence of T.L.V. (Threshold Limit Value)
- Reduced maintenance costs and extended sump life
- Total absence of formaldehyde releasers
- Absence of secondary amines and derivatives
- Absence of phenols (lower treatment costs of liquid effluents)
- Excellent cleaning and decantation power of fine and chips
- Excellent compatibility with all types of water
- Stability to bacterial attack and natural resistance to fungal contamination

MAINTENANCE LUBRICANTS

OIL FOR HYDRAULIC CIRCUITS

RUBRIC BIO VG is a lubricant for hydraulic circuits produced from biodegradable natural oils, it is free of mineral oil. It contains EP additives, metal passivating agents as well as a set of special additives that protect the mechanical components of the hydraulic system against wear. Maintenance lubricants are designed to improve the coefficient of friction between mechanical components such as bearings, gears, pistons, sleeves, valves, to reduce mechanical wear of pumps, valves and cylinders.

The hydraulic oils in this range are zinc-free. They are characterized by a high flash point and fire point, which protects them from fire hazards. The products are compatible with rubber components and elastomers used in machine tools. These hydraulic oils have no exposure limit: TLV (Threshold Limit Value).

SLIDEWAY LUBRICATION OIL

SUPRA SLIDE BIO 68 is a lubricant for machine slideways, produced from synthetic biodegradable esters of natural origin, it does not contain mineral oil. This product protects the circuits from wear and oxidation.

It has a very low coefficient of friction and allows smooth movement of the guides and slides of machine tools.
Its high viscosity index allows the formation of an excellent mechanical film stable at high temperatures.

PRODUCTS

NEAT OILS

		SUPRAGRIND INO 05 GV	SUPRACUT INO 10 MV	SUPRACUT INO 20 GV	SUPRACUT INO 30 GV	SUPRACUT INO 45 XV	SUPRACUT INO 45 FG
PHYSICO-CHEMICAL CHARACTERISTICS	Density at 20°C	0,860	0,874	0,888	0,902	0,914	0,912
	Viscosity at 40°C (mm²/s)	5,3	12,5	21	30,1	39,75	39,9
	Viscosity Index	155	177	209	204	202	200
	COC Flash point (°C)	180	190	224	260	304	304
	Fire point in (°C)	228	215	258	280	341	341
APPLICATIONS	Turning/Milling	X	R	R	R	R	R
	Tapping/Rolling	X	U	U	U	U	U
	Broaching/Gear Cutting	X	U	R	R	R	X
	Grinding	R	R	U	U	U	U
	Minimal Lubrication	R	R	R	R	R	R
	Honing	R	X	X	X	X	X
	Lapping	R	X	X	X	X	X
MATERIALS	Cast Iron / Steel	R	R	R	R	R	R
	Alloy steel	R	R	U	R	R	R
	Aluminium	U	R	R	U	U	U
	Yellow alloys	U	R	X	R	R	R

U - USABLE **R** - RECOMMENDED **X** - ABSENT

SOLUBLE FLUIDS

		SAFKOOL 6910 GV	SAFKOOL 6950 GV
COMPOSITION	Refractometer Index	1,96	1,35
	Mineral Oil	X	X
APPLICATIONS	Turning/milling	R	R
	Deep Drilling	U	R
	Tapping/threading	R	R
	Broaching/gear cutting	X	U
	Grinding	R	U
MATERIALS	Cast iron	R	U
	Steel	R	R
	Aluminum > 7% SI	X	R
	Yellow alloys	X	U

U - USABLE **R** - RECOMMENDED **X** - ABSENT

GENERAL LUBRICATION

		HYDRAULICS RUBRIC BIO VG 32	HYDRAULICS RUBRIC BIO VG 46	SLIDEWAY OILS SUPRA SLIDE BIO 68
PHYSICO-CHEMICAL CHARACTERISTICS	Color	Limpid	Limpid	Limpid
	Density at 20°C	0,911	0,888	0,927
	Viscosity at 40°C (mm²/s)	34	21	71
	Viscosity index	201	209	195
	COC Flash point (°C)	293	224	304
	Pour point	-18	-21	-20

TREATMENT OF SOLUBLE ADDITIVES

To support users of soluble machining concentrates from the MOTUL GREEN TECH range, MOTULTECH offers three treatment additives compatible with esters-based formulations:

MT SYSTEM DEFOAMER

MT SYSTEM DEFOAMER is a high-performance additive designed to reduce foam formation during machining operations. The product is a unique blend of siloxanes that are easily miscible with water-based emulsions. It is compatible with machine tool paints and surface treatments of parts.

MT SYSTEM DEFOAMER must be carefully pre-mixed in cutting fluid before use to facilitate dispersion in the tank.

MT SYSTEM DEFOAMER is a foam suppressor with immediate effect. It is advisable to add the dosage recommended in the data sheet near the pumps in the clean tank to allow a strong mixing in the emulsion.

MT SYSTEM CLEANER

MT SYSTEM CLEANER is a high-performance cleaner for machine tools that work with aqueous cutting fluids. The product is used for the disposal of residues, including sludge, present in the system. Its use is recommended for individual machines as well as for centralized systems. The product can be added in the soluble bath while the machine tool is in operation or in simple fluid circulation.

Its use is strongly recommended before emptying and replacing the used product with new one.

MT SYSTEM PH BOOSTER

MT SYSTEM PH BOOSTER is an additive used to increase the pH of soluble baths which will have suffered a bacterial attack or drop in pH. It is used after treatment of the bath with a disinfectant, to bring its anti-corrosion properties to an optimal level.

PH booster should be added to the soluble emulsion 24 hours after the start of the disinfection operation.

It is advisable to use it at the dosage recommended in the data sheet to obtain the best results.

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