TOTAL LUBRIFIANTS

METALWORKING FLUIDS

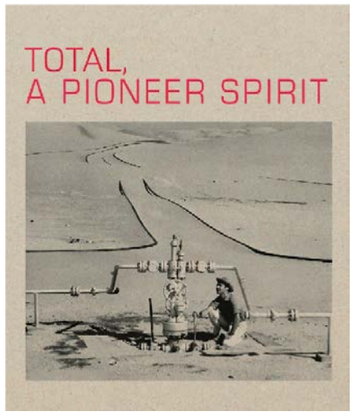
TOTAL
Committed to Better Energy

MAJOR ENERGY PLAYER

- Total is a major energy player, that produces and markets **fuels**, **natural gas** and **low-carbon electricity**.
- Our **100,000** employees are committed to better energy that is safer, more affordable, cleaner and accessible to as many people as possible
- Active in more than **130** countries, our ambition is to become **the responsible energy major**.

OUR HISTORY

- The Group's history began in **1924** with the creation of Compagnie française des pétroles (CFP).
- We have been innovating for nearly **100** years, to meet our customers' needs and expectations, throughout the world.
- The Group was braned **Total** in 2003, after merging with PetroFina then Elf. In 2018, Maersk Oil joined Total.



OUR VALUES

Like our history, our values represent that part of Total'sidentity that is shared by all.

SAFETY

RESPECT for Each Other

PIONNIER Spirit

Stand TOGETHER

PERFORMANCE-Minded

Total MetalWorking Fluids

SUMMARY

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Biopolymer Cutting fluid

FOLIA

The **FOLIA** range is a revolution in the field of metalworking. It is a biosourced and water based fluid free of oils and emulsifiers.

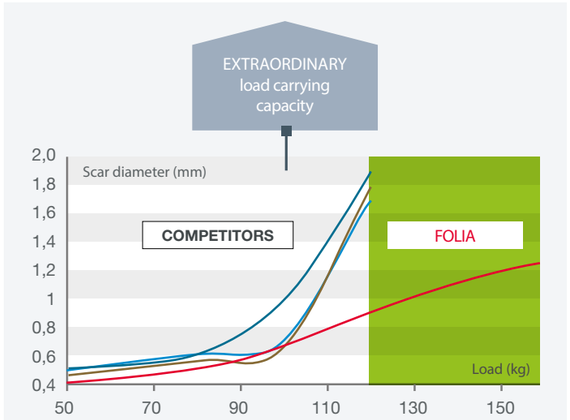
With a high lubricity and an excellent cooling power, it offers user an unique solution for multiple metalworking operations.

HIGH

LUBRICITY
COOLING POWER
VERSATILITY

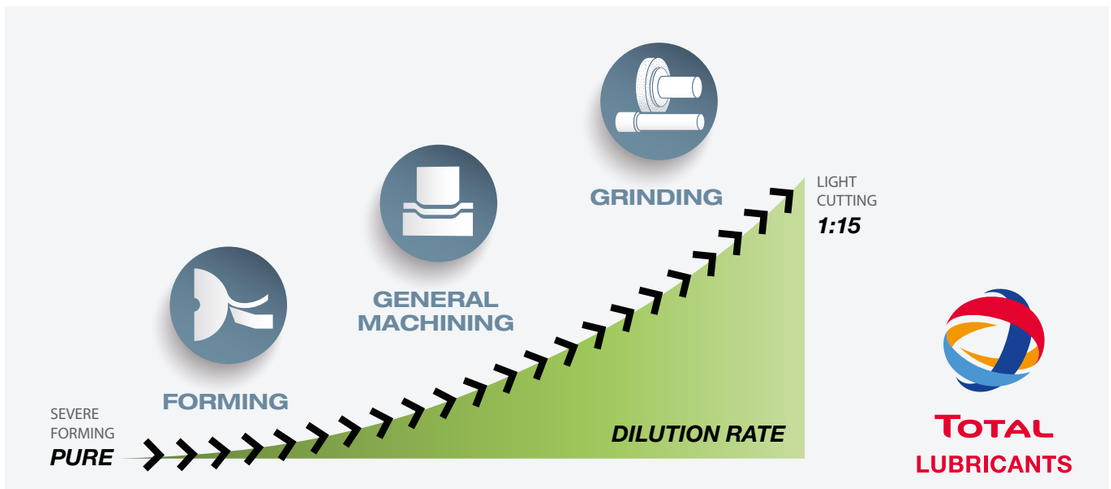
More savings | **Eco-friendly** | **Higher productivity** | **More satisfied employees** | **Less maintenance**

FOUR BALL TEST ASTM: D2783



VISUAL & COLOR

Comparative between the appearance of the **FOLIA** and the oil-based fluid after machining.



HEALTH, SAFETY & PERFORMANCE

Using advanced technologies, we bring to market the first and only metalworking fluid, that replaces standard oils with biosourced polymers, providing the best performance for the operators and their environment.

HEALTH

- Less hazardous components
- Boron free technology
- Limited pictograms

SAFETY

- No odor
- No dermatitis
- No fumes
- No oily machines / workspace

PERFORMANCE

- Longer tool lifetime
- Longer fluid timespan
- Less consumption
- Increased productivity

RENEWABLE
AND CLEAN
SOURCE LUBRICITY

PRODUCT OVERVIEW

Product	Metals								Applications			
	Aluminum (Si >7%)	Aluminum (Si <7%)	Copper alloys	Carbon steels	Cast iron	Carbide tool steels	Stainless Steels	Inconel & titanium alloys	Grinding	Milling, Sawing, Turning, Threading	Drilling, Reaming, Tapping	Broaching, Stamping
FOLIA												
FOLIA B 7000	•	-	•	•••	••	-	••	•	••	•••	•••	••
FOLIA G 5000	•	-	•	••	•••	•	••	•	•••	••	••	•
FOLIA W 7000*	-	-	•	••	•••	•••	••	•	•••	••	••	•
FOLIA Y 7000*	•	-	•••	••	••	•	•	•	•	•••	••	•

* To be released soon

Legend

- • Possible
- •• Suitable
- ••• Designed for

Neat Cutting Oils

VALONA

VALONA cutting oils cover a wide range of light to severe machining operations on various materials, while breaking new ground on the health, safety and environment front.

VALONA HC range consists of advanced mineral base oils. These oils undergo severe refining which modifies the nature of the molecules and makes them.

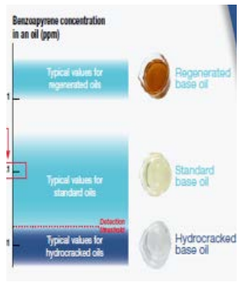
SAFE/EASY TO USE:
- Odorless
- Transparent
- Poor in aromatics (PAH*)
- Less evaporative

*Polycyclic Aromatic hydrocarbon

AND PERFORMANT:
- Low-mist
- Low-foam
- Lower consumption
- Longer lifetime

Our **VALONA HC** range is composed exclusively of hydrocracked oils, with a Benzoapyrene[1] content below detection thresholds.

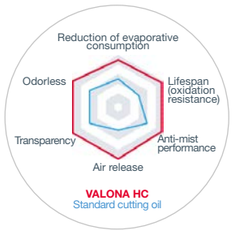
The INRS[2] publishes a maximum recommended concentration value for Benzoapyrene in cuttung oils.

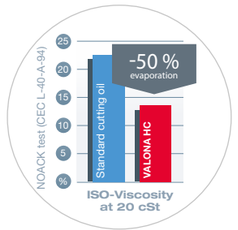


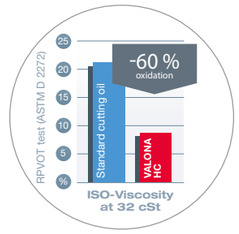
[1] Benzoapyrene is a molecule belonging to the Polycyclic Aromatic Hydrocarbon (PAH) family, classified as carcinogenic.

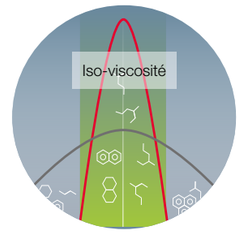
[2] National Research and Safety Institute for the prevention of occupationnal accidents and diseases in France.

For more information: www.inrs.fr



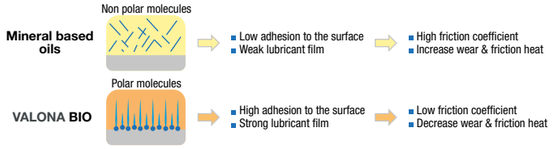






VALONA BIO range consists of rapidly biodegradable, vegetable-based neat cutting oils. Formulated from carefully selected mineral oil-free base and performance additives, **VALONA BIO** products are the ultimate solution to answer the following requests:

- Label-free products even at low viscosity (<20.5 cSt at 40°C), ensuring a maximum tolerability by the operators;
- High flash and fire points to limit fire risks;
- Exceptional performance thanks to use of polar compounds.



VALONA BIO can be used in Minimum Quantity Lubrication (MQL) systems

VALONA MQL range is dedicated to Mist Quantity Lubrication (MQL), covering light to severe machining operations on various metals.

VALONA MQL neat cutting oils ensure:
- Reduced oil consumption;
- Higher productivity and lower production cost;
- Better valorization of metal chips

PRODUCT OVERVIEW

Product	Material					Machining operation				Specification
	Yellow-metals	Aluminium	Steels	Stainless steels	Carbide tool	Honing	Grinding to light machining	Light-severe machining	Very Severe machining	Viscosity at 40°C [mm2/s or cSt]
VALONA HC										
VALONA GR 3008 HC	•••	•	•••	•••		•••	•			8
VALONA GR 5005 HC	•••	•	•••	•••		•••	•	•		5
VALONA GR 7007 HC	•••	•••	•••	•••		••	•••	•		8
VALONA GR 7012 HC	•••	•••	•••	•••		••	•••	•••		14
VALONA GR 9005 HC	•	•	•	•	•••		•••			6
VALONA MS 5020 HC	•••	•••	•••	•			••	•••		22
VALONA MS 5032 HC*	•••	•••	•••	•			••	•••		33
VALONA MS 7009 HC	•••	•••	•••	•••			••	•••	•	10
VALONA MS 7023 HC	•••	•••	•••	•••			••	•••	•	23
VALONA MS 7116 HC	•••	•••	•••	••			••	•••	•	15
VALONA MS 7046 HC*	•••	•••	•••				••	••		43
VALONA ST 9013 HC		•	•••	•••			••	•••	••	13
VALONA ST 9037 HC		•	•••	•••			••	•••	••	42
VALONA ST 9122 HC		•	•••	•••			••	•••	••	22
VALONA BR 9015 HC			•••	•••			•	•••	•••	15
VALONA BIO*										
VALONA GR 7007 BIO	•••		•••	•••		•••	•••			7
VALONA MS 7010 BIO	•••	•••	•••	•••			••	•••		9
VALONA MS 5016 BIO	•••	•••	•••	•••			••	•••		15
VALONA MS 7022 BIO	•••	•••	•••	•••			••	•••	•	25
VALONA MQL										
VALONA MQL 3036 BIO	•••	•••	•••	•			•••	•••		36
VALONA MQL 3046	•••	•••	•••	•			•••	•••		46
VALONA MQL 5035	•••	•••	•••	•••			•••	•••	•	35

* Can be used for machine tool lubrication

Grinding and/or Honing	GR
Machining of ferrous and non-ferrous metals	MS
Machining of mild to high alloyed steels	ST
Broaching	BR
Minimum Quantity Lubrication	MQL

Legend

•	Possible
••	Suitable
•••	Designed for

Cutting fluids

SOLUBLES

All our **SOLUBLES** fluids are formulated to satisfy the highest technological requirements for your industrial applications while simultaneously providing maximum safety for your operators. In particular they contain no formaldehyde releaser.

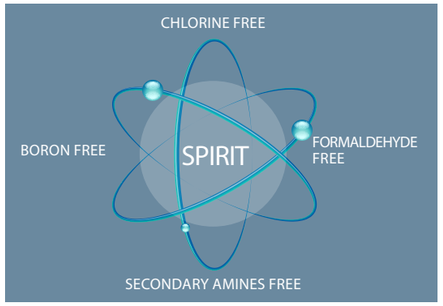
Total offers a wide range of soluble fluids: Emulsion (macro-emulsions) with **LACTUCA**, Semi-Synthetic (micro-emulsions) with **SPIRIT**, Synthetic fluids with **VULSOL**: the nature of the molecules and makes them.

EMULSION	SEMI-SYNTHETIC FLUID	SYNTHETIC FLUID
LACTUCA	**SPIRIT**	**VULSOL**
Dedicated to lubrication	Perfect balance between cooling and lubrication	Performance without mineral oil

Their formulation guarantees machining performance for any type of metals and severity of operations:
Reinforced antiwear properties | Extended anticorrosion properties | Outstanding resistance to microorganism development | Improved antifoaming properties

FOCUS ON THE LATEST TECHNOLOGY:

- SPIRIT 3000
- SPIRIT 5000
- SPIRIT 7000
- SPIRIT X 5000
- SPIRIT X 7000



Formulated with the safest molecules available on the market

SPIRIT X 5000 & SPIRIT X 7000

Health

Safety

Performance

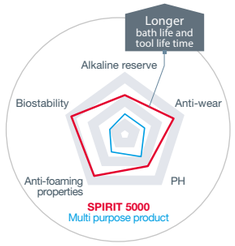
Biocide free technologie | No labeling

The new **SPIRIT X** series offers “X-TRA safe + X-TRA performance = X-TRA care for you and your operations“

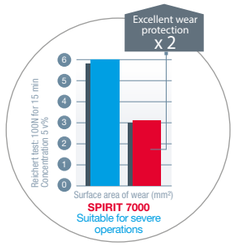
SPIRIT 3000, 5000, 7000

Economical | Multi-Service | Hight Performance

SPIRIT 3000 is a new water based fluid, optimized for grinding and general machining. It has been **specially designed for cast iron and soft & medium hard steels.**



SPIRIT 5000 is a new water based fluid, optimized for general machining and grinding. It has been specially designed **for cast iron, steels and aluminum**. Its technical performances enable more efficient operations for a better productivity.



SPIRIT 7000 is a new improved fluid for demanding operations and customers. Its technical properties are specially designed for **heavy machining and hard metals.**

PRODUCT OVERVIEW

Product	HSE profile	Metal operations	Grinding	Light machining	General machining	Heavy machining	Metals	Cast iron	Low &medium alloyed steels	High alloyed & stainless steels	Titanium	Aluminium alloys (Si>7 wt%)	Aluminium alloys (Si< 7 wt%)	yellow metals
LACTUCA														
LACTUCA LT 3000	••			•••	•••			•	•••	••		•		•••
LACTUCA WBF 9400	••			•••	•••	••		•	•••	•••	•	••		••
SPIRIT														
SPIRIT 3000	••		•••	•••	•••			•••	•••	•				
SPIRIT 5000 F	•		•••	•••	•••	•		•••	•••	••		••		
SPIRIT 5000	••		•••	•••	•••	•		•••	•••	••		••		
SPIRIT 5000 X	•••		•••	•••	•••	•		•••	•••	••		••		
SPIRIT 7000	••		•	•••	•••	•••		•	•••	•••	•••	•••	•••	••
SPIRIT 7000 X	•••		•	•••	•••	•••		•	•••	•••	•••	•••	•••	••
SPIRIT WBA 5600	••		•	•••	•••	••		•	•••	•••	••	•••		•••
SPIRIT WBF 7200	••		•	•••	•••	••		•	•••	•••	••	•••		••
VULSOL														
VULSOL MSF 5200	••		•••	•				••	•••	•				
VULSOL MSF 7500	••		•••	••	•			••	•••	••	•			
VULSOL WBF 7219	••		•••	••	•			••	•••	••	•			

Brass (Laiton in French)	LT
Without Boron and amine	WBA
Without boron and formaldehyde	WBF
Multiservice and without formaldehyde	MSF

Legend

•	Possible
••	Suitable
•••	Designed for

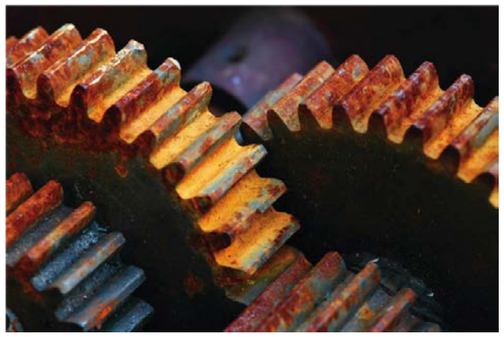
Rust Preventive oils

OSYRIS

OSYRIS oils are designed to protect parts from the risks of corrosion during storage and transportation. Total offers a wide range of products in accordance with the required properties of the protective film (oily, waxy or varnish).

OSYRIS can be:

- Applied to all ferrous metals, from cast iron to alloyed steels,
- Applied by dipping, spraying and brush application,
- Removed with the aid of solvents and alkali cleaners.



PRODUCT OVERVIEW

Product	Type of the film			Protection				Type of product		Flash point
	Oily	Waxy	Varnish	< 6 months	6-8 months	8-12 months	> 18 months	Oil	Solvent	
OSYRIS										
OSYRIS Y 1000	•				•			•		> 150°C
OSYRIS Y 4000	•				•			•		> 150°C
OSYRIS Y 5000	•					•		•		> 150°C
OSYRIS DWX 3000		•			•				•	< 60°C
OSYRIS DWY 4000		•			•				•	> 60°C
OSYRIS DWY 5000		•				•			•	> 60°C
OSYRIS DWY 6000		•				•			•	> 60°C
OSYRIS DWL 3550		•			•				•	> 60°C
OSYRIS X 9100			•				•		•	< 60°C

Solvent based	X
Oil-based	Y
Dewatering & Flash point < 60°C	DWX
Dewatering & Flash point > 60°C	DWY
Dewatering & Flash point > 60°C & low odor	DWL

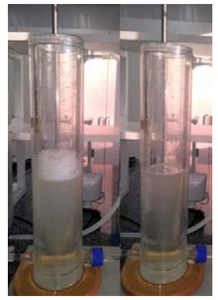
Post-treatment Additives

SERADE

The **SERADE** range consists of post-treatment additives. Used at the right time, based on the recommendations of your technical advisor, these additives allow you to extend the life of your soluble cutting fluid baths in service.

SERADE products are best used with our ANAC SOLUBLE service.

In fact, ANAC SOLUBLE service provides analysis report of different parameters of your bath(s) and our recommendations for using **SERADE** post-treatment additives if necessary.



Left : foaming
Right : use of SERADE ANTIFOAM

PRODUCT OVERVIEW

Products	Application	Function
SERADE		
SERADE SYSTEM CLEANER	System cleaner for machine tools	Cleans machine tools before draining
SERADE ANTIFOAM	Defoamer for emulsions and synthetic soluble fluids	Avoids foaming
SERADE ACR FERROUS	Corrosion inhibitor for ferrous metals	avoids corrosion of ferrous metal parts
SERADE ACR NON-FERROUS	Corrosion inhibitor for non-ferrous metals	avoids corrosion of non-ferrous metal parts
SERADE WQ MINUS	Water hardness decreasing agent	avoids the formation of white deposits due to over-hard water
SERADE WQ PLUS	Water hardness increasing agent	avoids foam due to over-soft water
SERADE WQ BUFFER	pH increasing agent	Extends lifetime of the bath
SERADE AW EMULSION	Anti-wear agent for emulsions	Decreases friction wear
SERADE AW SYNTHETIC	Anti-wear agent for synthetic fluids	Decreases friction wear
SERADE STAB EMULSION	Stabilizing agent for emulsions	Use in case of severe contamination by grease and oils (e.g. tramp oil)
SERADE STAB SYNTHETIC	Stabilizing agent for synthetic fluids	Use in case of severe contamination by grease and oils (e.g. tramp oil)

Oil-based	Y
Dewatering & Flash point < 60°C	DWX
Dewatering & Flash point > 60°C	DWY
Dewatering & Flash point > 60°C & low odor	DWL

Product data sheets and your technical advisor(s) help you define the right concentration of **SERADE** post-treatment additives for your situation.

Forming Fluids

MARTOL

The **MARTOL** range brings you multi-purpose and innovative products for metalforming applications that require optimized lubrication. This goes towards:

- Reduced VOC emissions and improved air quality
- Minimal or no degreasing step after stamping operation
- Enhanced forming capacity for stringent processes
- Longer tool lifetime and higher production rates
- Decrease in oil consumption.

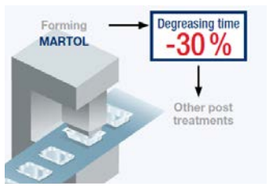
THREE TECHNOLOGIES FOR ALL YOUR NEEDS

NEAT OILS

Our range of neat oils covers all the physical and chemical properties needed for the success of your cold forming operations: viscosity, lubricity, extreme pressure and non-extreme pressure properties, etc.

With our range, you are assured to find the suitable product for your needs.

LIMITED DEGREASING TIME TO IMPROVE PRODUCTIVITY



FACING THE CHLORINE ISSUE

This use of chlorine is more and more regulated worldwide.

This is why Total offers:

- Highly additivated sulfurised products, to be used successfully under very high loads
- New generation of chlorinated products that are non toxic following 1999/45/EC, or CLP

SOLUBLE OILS

As the forming operations give off a lot of heat, our **MARTOL SOLUBLE** oils combine strong lubricating and cooling powers.

When used as an emulsion in water, they reduce product consumption.

VANISHING OILS

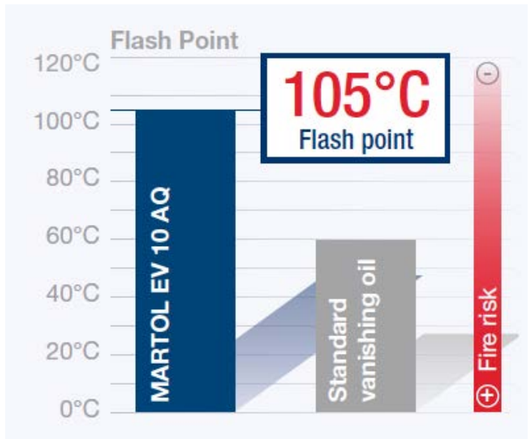
Formulated from light petroleum cuts, vanishing oils allow to reduce or even eliminate degreasing operations.

They are perfectly suited to medium difficulty or high throughput operations.

NEW GENERATION OF VANISHING PRODUCTS TO REDUCE VOC* EMISSIONS

The product does not contain any VOC and still has a fast evaporating rate, thus limiting the degreasing operations.

At the same time, the high flash limits the fire risk to ensure the safety of the workshop, thus decreasing all related costs.



*Volatile Organic Compound

PRODUCT OVERVIEW

Product	Material					Operation				Characterictics	
	Stainless Steel	Steel, galvanized steel	Aluminium	Copper	Thickness (mm)	Drawing	Deep drawing	Wire drawing	Stamping / Punching / Blanking	Flashpoint (°C)	Viscosity @ 40°C (mm²/s)
NEAT OILS											
MARTOL AL 150			•••	•	≤ 100	•••	•••	•••	••	> 180	147
MARTOL AL 60			•••	•	≤ 10	•••		••	•••	> 180	55
MARTOL AL 20 HC			•••	•	≤ 1	•••		•	••	> 180	25
MARTOL EP 405 CF	•••	•••	•		From 2 to 5	•••	•••		••	> 180	400
MARTOL EP 235 CF	••	••	•		≤ 3	•••	•••		••	> 180	230
MARTOL EP 100 CF	••	••	•		≤ 3	••			••	> 180	101
MARTOL EP 65 CF	••	••	•		≤ 3	••			•••	> 180	60
MARTOL EP 5 CF	••	••	••		≤ 2	•			••	94	3
MARTOL EP 185	•••	••	••	•	From 10 to 100	•••	•••		•••	> 180	175
MARTOL EP 79	•••	••	••	•	From 1 to 10	•••	•••		••	> 180	78
VANISHING OILS											
MARTOL EV 45	•	•	•••	•	< 4	•			•••	62,5	2,1
MARTOL EV 40 CF		•	•••	•	< 4	•			•••	59,5	1,5
MARTOL EV 10 AQ		•	•••	•	< 2	•			•••	104	2,5
MARTOL EV 10 CF		•	•••	•	< 1,5	•			•••	58,5	1,3
MARTOL LVG 25 AQ		••	•••	•	< 2	••			••	105	2,8
MARTOL LVG 25 CF		••	•••	•	< 2	••			••	74	1,7
MARTOL LVG 15 CF		••	•••	•	< 1	••			••	59	1,3
FOOD MANUFACTURING OILS (FMO)											
MARTOL FMO 235 CF			•••			•••	•••		•••	270	235
MARTOL FMO 75 CF			•••			•••	••		•••	256	75
MARTOL FMO 15 CF			•••			•••			•••	240	15

* Non toxic according to 1999/45/EC
** Both the oil and its additives can be washed away with an increase in temperature (brazing, annealing etc…).

Aluminium	AL
Extreme Pressure	EP
Standard Vanishing	EV
Thermal Degreasing	LVG
Air Quality to reduce VOC emissions	AQ

Legend

•	Possible
••	Suitable
•••	Designed for

Electrical Discharge Machining

DIEL

The **DIEL** range consists of multiservice fluids for spark erosion, from roughing to finishing operations.

DIEL MS are formulated from advanced base oils, contributing to the continuous improvement initiatives in regards to Health, Safety and Environment

DIEL electro erosion fluids comply with the European directives concerning the VOC emissions.

DIEL fluids ensures:

- Extended bath lifetime due to high resilience to oxidation;
- Reduced fire risks due to a high flashpoint;
- Safer use of the fluid due to aery low aromatic content

PRODUCT OVERVIEW

Product	Applications	IOEM Approvals	Viscosity at 40°C	Specifications
ELECTRICAL DISCHARGE MACHINING				
DIEL MS 5000	Preliminary work and semi-fenishing	Agie-charmilles, krupp-nassovia	3,9	ISO-L-MHA
DIEL MS 7000	Semi-finishing work and finishing for complex forms and precise dimensions	Agie-charmilles, ona,zimmler & klein, nassovia, waldrich siegen	2,4	ISO-L-MHA, NADCAP (DMP66)
DIEL MS 9000	Finishing for complex forms and precise dimensions	Agie-charmilles, zimmler & klein, nassovia, waldrich siegen	1,8	ISO-L-MHA, NADCAP (DMP66)

Machining of ferrous and non-ferrous metals	MS

Spindle & Slide way lubricants

DROSERA

DROSERA range offers a wide range of products for all parts of machine tools (hydraulics, slideways, gears).

- High speed machine spindles (grades 5, 10, 15 and 22) and very high speed (grade 2).
- Machine tool slideways under all conditions of speed and load (grades 68 to 320).
- Hydraulic circuits for hydraulic pumps and motors (grades 32 and 46).
- Gear boxes and feed mechanisms of all types with or without wet electro magnetic clutches (grades 68 to 320).
- Hydrodynamic lubrication of mill roll stands during grinding (grade 460).

DROSERA oils offer the following advantages:

- Very low coefficient of friction.
- Anti-oil mist properties.
- Very good foaming resistance.
- Very good oxidation resistance
- Very good protection against rust
- Very good anti-wear properties.
- Good filterability

PRODUCT OVERVIEW

Product	Applications	Specific advantages	Viscosity*	Specifications
SPINDLE OIL				
DROSERA MS	Spindle oils for lubrication of high-speed machine spindles	High speed machine spindles (grades 5, 10, 15 and 22) and very high speed (grade 2)	2, 5, 10, 15, 22	• ISO 6743-2: FD 2-5-10-15-22
MULTIPURPOSE OIL (HYDRAULICS, SLIDEWAYS, GEARS)				
DROSERA MS	Multipurpose range for all machine tool parts depending on the viscosity of the lubricant: hydraulics, slideways, gears, feed and gear boxes.spindle movements, feed and gear boxes.	Wide range of applications.	32, 46, 68, 100, 150, 220, 320, 460	Depending on viscosities: • ISO 6743-4: HG 32 • ISO 6743-13: GA 68-100-150-220 • DIN 51502: CGLP 46-68-100-150-220-320-460
DROSERA HXE 68	Way lubricant including those lined with synthetic resin, feed and gear boxes.	Compatibility with cutting fluids, including aqueous based fluids.	68	• ISO 6743-13: GB 68 • DIN 51524 Part 2: HLP 68 • DIN 51517 Part 3: CLP 68 • DIN 51502: CGLP 68
DROSERA HXE 220	Way lubricant including those lined with synthetic resin, feed and gear boxes.	Compatibility with cutting fluids, even of the aqueous kind.	220	• ISO 6743-13: GB 220 • DIN 51502: CGLP 220 • DIN 51517 Part 3: CLP 220

Machining of ferrous and non-ferrous metals	MS

Quenching oils

DRASTA

DRASTA quenching oils match all thermal treatment requirements and all types of installation. Formulated from base oils selected for their exceptional resistance to oxidation, they offer a cost-effective means of enhancing the mechanical properties of components.

DRASTA C are cold quenching oils based on a technology that reduces odors and significantly increases the flash point limiting the risk of fire. The very low volatility reduces evaporation losses making it more users friendly. Its oxidation resistance limits the soot and extends the lifetime of the oil.

DRASTA C series are adapted to meet all heat treatment needs.

DRASTA H are hot quenching oils specially formulated to ensure longer sump life.

PRODUCT OVERVIEW

Product	Quenching Sump Temperature (°C)	Maximum Cooling Speed (°C/s)	Flash Point (°C)	Typical applications
DRASTA				
DRASTA C 1022	20-80	53	230	Steels with high hardenability (torsion bars, springs)
DRASTA C 5022	20-80	90	222	screws and bolts
DRASTA C 7025	20-80	102	228	Steels with high martensite start (leaf spings)
DRASTA C 9022	20-80	113	232	Steels with low martensite start (Bearings)
DRASTA H 5160	120-160	91	282	Gears

Degreasing solutions for

INDUSTRY

FINADET detergents are designed to clean production areas and can be used in the food industry and for difficult cleaning of all types of pollution.

FINASOL solvents are dispersants for cleaning engines and a very wide range of materials. Their properties permit eliminating greases and removing insoluble components, without affecting the quality of the items cleaned.

PRODUCT OVERVIEW

Product	Type	Applications	Specific advantage	Methods of application
FINADET				
FINADET FPI	Special food industry detergent	Grease removal and cleaning for the food industry: metal and plastic parts, vehicles designed to transport food.	• An optimized mixture of surfactants: saves time and effort, • Dilutable in all types of water, • Optimal pH and contains little alkali.	Foam spray trucks, jets, independent sprays (non self-washing)
FINADET MF	Highly concentrated detergent	Difficult cleaning: metal and plastic parts, conveyor belts, tanks, bodywork, brushing and washing machines, floors.	• Strong solvent power: very high concentration of active ingredients, • Easily rinsed foam.	High pressure hoses
FINADET SW	Special washing machine detergent	Special cleaning of parts placed in closed washing machines.	• Automatic, • Foam free.	Machines (cloths, rushes)
FINASOL				
FINASOL BAC	Fast evaporating degreasing agent.	• Degreasing mechanical parts: machined parts, chassis, machine tool frames, bearings, pinions, filters, injection moulds. • Preparation of surfaces before assembly.	• Fast evaporation, • Compatible with all metals, most plastic materials and elastomers.	Fountain cleaner brush: high settling capacity.
FINASOL FPI	Synthetic fuel, No benzene, No aromatic compounds.	Degreasing and cleaning for the food industry, mechanical parts, machine tool frames, bearings, pinions, filters, chains.	• Odorless, • Compatible with metals, glass, ceramics, composite materials, most thermoplastics and thermoset plastics insensitive to organic solvents.	Cloth, tampon, brush, fountains immersion, ultrasound
FINASOL HD	Emulsifiable degreasing agent, Especially for fuels.	Cleaning of all engines: automobiles, heavy trucks, boats, etc.	• Remarkable wetting properties, • Fast action, • Pine odor.	Low pressure spraying, brush, dipping, hose.
FINASOL BIO*	Pure or diluted degreasing agent, 100 % plant based, Labeled.	Cleaning of all engines, Elimination of fuels and resins, Removes tar, bitumen, floor cleaning.	• Odorless, biodegradable and non toxic, • Not aggressive for elastomers or plastics.	Fountain cleaner brush, spraying.
FINASOL MF	Emulsifiable degreasing agent.	Multipurpose.	• Leads to the complete dissolution of oily pollutants and the removal of insoluble components.	Immersion, brush, low pressure spraying, brush, straight.

* No volatile organic compounds (VOC): + no emission of solvent fumes, no flames.
- heavy, does not evaporate on parts/floors (rinse with hot water).

Industrial Solutions

SERVICES

TOTAL ANAC INDUS, customize the monitoring of your gearbox

- Reduce your operating costs.
- Anticipate and plan maintenance operations to perform them at the best time.
- Optimize drain intervals and extend the lifetime of your equipment.
- Improve the reliability and performance of your equipment.

OPTIMIZE YOUR OIL CHANGE STRATEGY Built on the expertise of our engineers, TIG 6 offers you to:

- Increase efficiency and savings of your maintenance management.
- Monitor lubricant parameters and analyses with a single tool.
- Assert your quality and safety management through management of lubricant documentation and critical points.

THE IN-DEPTH DIAGNOSTIC SYSTEM FOR CUTTING FLUIDS IN METAL WORKING

TOTAL ANAC Soluble is a personalised diagnosis system for soluble cutting fluids used in metal working. It is performed by the Total Lubricants Soluble Fluid production site in Osnabrück, Germany. The experience and knowledge of their experts permits precision results at the service of the customers.

TOTAL ANAC Expert is recommended for:

- Monitoring of the bath to get the best operating conditions at the lowest process cost.
- Checking the product concentration, the stability and the fluid performance.
- Extending lifetime of the bath and the tools in an eco-responsible way

MEASURED CHARACTERISTICS

TOTAL ANAC Soluble is offered in 3 sets :

- Basic : all essential characteristics of the emulsion are checked like product stability
- Standard : basic set + water hardness and conductivity especially
- Expert : a full analysis including a bacterial check and anti-corrosion properties are tested for all baths, including those with longer periods of stand still.

	Basic	Standard	Expert
Smell	•	•	•
Appearance	•	•	•
Total Hardness		•	•
Nitrite content		•	•
Bacteria			•
Fungi			•
Refract Brix	•	•	•
pH	•	•	•
Tramp oils	•	•	•
Ref corr Fac	•	•	•
Conc Ref	•	•	•
Conc RA			•
Chip corrosion test			•
Conductivity		•	•
Total dissolved solids		•	•

TOTAL IF SERVICES

Soluble oil bath monitoring service to guarantee the quality of the machining and preserve the life of equipment.

YOUR CHALLENGES

Efficiency and productivity are your priorities

The reliability of your static equipment is essential

Your high value-added equipment requires daily checks to ensure that it is working properly.

OUR SOLUTIONS

At Total, we attach importance to the satisfaction of our customers and work every day to provide the best experience possible.

The aim of this innovation is to offer a better and faster recommendation to maintain baths in optimal conditions and increase their lifetime.

ADDED VALUE

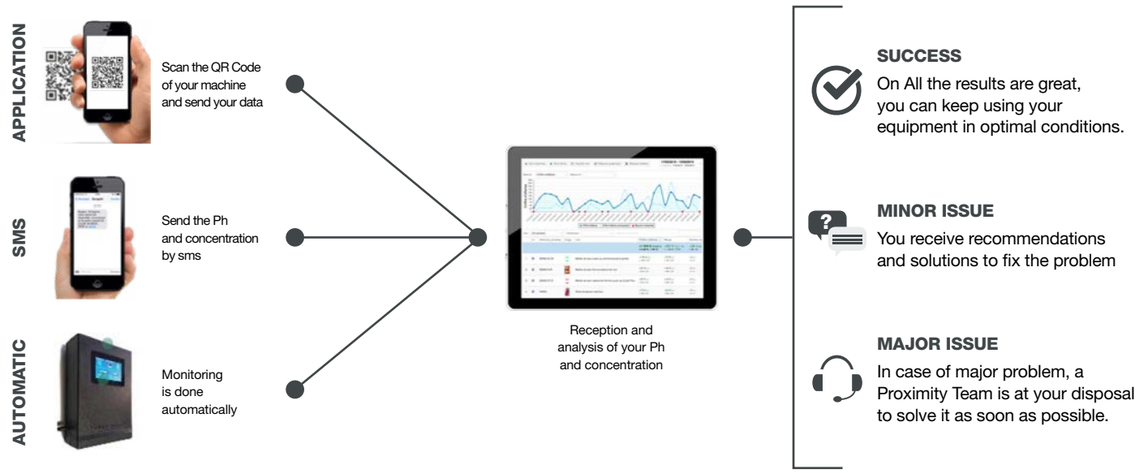
Reduced Costs : Automatic monitoring aims to reduce your operating costs.

Safety : Regularly checked equipment highly reduce possible incidents.

Efficiency : Interactive Fluid will give you access to many information concerning your machine park. It ensures the productivity and lifetime of your equipment.

Core Activity : Digitalizing the control of your static equipment will allow you to focus on the essential, your business.

Time Saving : We take care of the analyses to optimize the management of your equipment. It Increases your employee's productivity by simplifying the monitoring process.



LUBPILOT

A UNIQUE DIGITAL AND INNOVATING SERVICE

Using our smart sensors, you will be able:

- To monitor lubricant levels in your customers' drums and in workshops in real time.
- To be notifi ed to re-deliver.

To maximise your sales performances and your logistics effi ciency!

QUICK BENEFITS

- Reduced out of stock situations
- Reduction in missed sales
- Increased customer loyalty
- Anticipation of your customer needs
- Less emergency deliveries
- Reduced storage costs

A SERVICE THAT IS EASY TO SET UP

1 • On the platform, I link the sensor to my customer and the product reference.

2 • The sensor is easy to screw onto my customer's drum opening.

3 • I am notifi ed when the level reaches a pre-defi ned threshold.

4 • I control my lubricant activity by anticipating my needs.

5 • When the drum is empty, all my customer needs to do is screw the sensor onto the new drum of the same product reference.

A major player

With our production, supply chain and commercial presence in more than 150 countries, we deliver a full range of lubricants.

Support and partnership

Thanks to local technical presence, we provide a high level of service to optimize your Total cost of Ownership.

5 good reasons for choosing TOTAL

References & OEMs

Total Lubrifiants cooperates with equipment manufacturers to create high-technology products for optimal performance and production of your machinery.

Innovation & Research

Total invests in biotechnologies to find the most suitable components to reach energy efficiency through formulations designed in our Research Centers.

Quality and environment

Total Lubrifiants ISO 9001 and 14001 certifications are the guarantee of a long term commitment to quality and environment. From the initial design stage, our R&D teams seek to develop products that minimize toxicity risks and environmental impact.

lubricants.total.com

Total Industry Solutions

Safety Data Sheets are available at quickfds.com

ms.industry.lub@total.com

TOTAL
Committed to Better Energy