

Hygiene, Safety, Environment

In TOTAL aqueous cutting fluids you will find an answer to your hygiene, safety and environmental concerns that fully complies with current and forthcoming regulations.

All such products are chlorine-free and comply with German TRGS 611 regulations regarding the content limit of nitrosamine-precursive secondary amines.

Most products form part of the WGK 1 water danger class.

Our concern that our cutting oils should be harmless explains why at the earliest opportunity the new national and international regulations, such as the 1999/45/CE or the BPD 98/8/CE, were taken into account.

Maintenance of the in-service product also occupies an important position as regards this concern for hygiene and safety in relation to operatives.

- Monitor very regularly- at least once weekly - the concentration, pH and the micro-organism content of the in-service fluids.
- adapt the filtration-type purification systems, settlers, de-oilers required for your installation and operations.

Good monitoring practice regarding cutting oil:

- prior to application of aqueous fluids, we recommend use of a TOTAL CLEANER CB-1-type detergent and asepticising product.
- always use clean and high-quality biological and physico-chemical water.

Proper maintenance of your cutting oils guarantees:

- ▶ Safety of employees
- ▶ Protection of machines
- ▶ Continued productivity



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Soluble cutting fluids



For further information, visit our Web site:
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SOLUBLE CUTTING FLUIDS - A comprehensive range for all machining operations

APPLICATIONS	PRODUCTS	SPECIFICATIONS ISO 6743/7
<p>TOTAL LUBRIFIANTS presents a new range of soluble fluids intended for metalworking, etc.</p>  <ul style="list-style-type: none"> • Chlorine, DEA (diethanolamine), nitrite, PTBB acid and phenol -free they guarantee the safety of the user and the environment. • By virtue of their state-of-the-art design, these water-soluble cutting fluids possess a remarkable stability in service as well as good anti-foaming properties. • They are studied so as to guarantee very good protection against the corrosion of parts and machines and an easy emulsion formation. 	<p>LACTUCA: emulsion SPIRIT: micro-emulsion VULSOL: synthetic</p>	
EMULSIONS		
<ul style="list-style-type: none"> ■ Cutting oil designed for routine turning, milling and piercing operations ■ This product is more particularly intended for the machining of copper alloys and high-grade carbon steels ■ Recommended rate of use: 5%. 	LACTUCA LT 3000	ISO - L - MAA
<ul style="list-style-type: none"> ■ Soluble oil with a high mineral oil content which confers wettability and lubricity properties to reduce the cutting force and to obtain very good surface states for operations of all types ■ This macro-emulsion is especially recommended for the machining of aluminium and construction steels ■ Recommended rate of use: between 5 to 8%. 	LACTUCA MS 5000	ISO - L - MAC
<ul style="list-style-type: none"> ■ Extreme-pressure cutting oil designed for all types of machining on ferrous and non-ferrous metals: steel, stainless steel, aluminium and copper ■ This product is more particularly suited to difficult and very difficult machining operations ■ Recommended rate of use: between 5 to 8%. 	LACTUCA MS 7000	ISO - L - MAD
MICRO-EMULSIONS		
<ul style="list-style-type: none"> ■ Micro-emulsion which combines the advantages of a conventional micro-emulsion and a synthetic fluid ■ Well suited for most machining operation on most metals ■ Very good results for grinding operations ■ Recommended rate of use: between 4 to 8%. 	SPIRIT MS 5000	ISO - L - MAF
<ul style="list-style-type: none"> ■ Chlorine and amine free cutting fluid providing an excellent stability in service ■ Particularly designed for severe machining and grinding operations ■ Very well suited for machining ferrous and non ferrous metals, highly multifunctional ■ Recommended rate of use: between 5 to 8%. 	SPIRIT WBA 5000	ISO - L - MAF
<ul style="list-style-type: none"> ■ Severe and very severe machining operations ■ Particularly suited for machining aluminium and aluminium / silicon alloys ■ Also suitable for steels and stainless steels ■ Recommended rate of use: between 5 to 10%. 	SPIRIT ASI 7000	ISO - L - MAF
SYNTHETIC FLUIDS		
<ul style="list-style-type: none"> ■ A synthetic fluid giving a clear solution with water ■ Excellent wetting and cooling power ■ Particularly suited to ferrous metals grinding operations ■ The product is made up of additives ensuring an excellent anti-rust level and appropriate behaviour in relation to paints and joints ■ Recommended rate of use: 4%. 	VULSOL MS 5000	ISO - L - MAG
<ul style="list-style-type: none"> ■ A synthetic fluid giving a clear solution with water ■ Gives good visibility for the operator on machining (turning, milling, etc.) ■ This product is also used for shaving and broaching operations on ferrous and non-ferrous metals thank to its detergency and extreme-pressure properties ■ Recommended rate of use: 5%. 	VULSOL MS 7000	ISO - L - MAH
<ul style="list-style-type: none"> ■ Full synthetic product recommended for machining ferrous, non-ferrous metals and plastic materials ■ This product is also used for grinding metals and polishing glasses ■ Very good settling of grinding sludge ■ Boron free product ■ Recommended rate of use : 5 %. 	VULSOL MS 7500	ISO - L - MAH
<ul style="list-style-type: none"> ■ Full synthetic product recommended for grinding hard metals ■ The special composition prevents the development of cobalt ions ■ Very good protection against corrosion ■ Recommended rate of use : 4 %. 	VULSOL COB 5100	ISO-L-MAG
CLEANING FLUID		
<ul style="list-style-type: none"> ■ Fluid with detergent properties for thorough safe cleaning of tanks and dispensing systems for soluble cutting fluids ■ Recommended rate of use: 1 to 3%. 	CLEANER CB-1	-

