We are FUCHS Lubricants

At FUCHS Lubricants, we see ourselves as a long-term business partner to our customers. We are problem solvers with knowledge of our customers' operations, processes and the increasing commercial demands that are placed in a rapidly changing world.

Together with our customers, we identify new opportunities to streamline production and handling, which leads to increased profitability. In close collaboration, we combine our respective areas of expertise to achieve optimum results, which in some cases may call for bespoke solutions.

The right cleaner – equally important as the right machining fluid
Choosing the right cleaner for metalworking is an excellent example of how a minor detail can make a major difference. As well as ensuring clean components, the right cleaner minimises corrosion and discolouration. The cleaner is used at the end of the process and is often crucial to the final result.

Products that measure up in every respect
A cleaner should affect the environment as little as possible throughout its life cycle. We place great emphasis on developing new products that have a longer life span, in order to minimise stoppages and thereby increase productivity. We strive to maximise our products' cleaning performance at lower temperatures to save energy.

Our Application Guide gives you an overview of suitable combinations of cleaners and materials.

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Application Guide – Cleaners

Application Guide – Cleaners

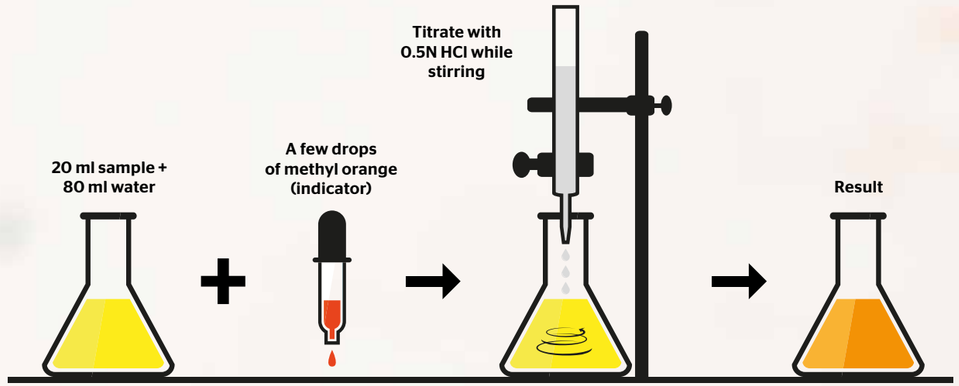
Product	Cloud Point °C	Recommended Temperature °C	Recommended Concentration %	TA-factorer	pH 5%	Salt free	Material: Steel	Cast iron	Aluminum
CleanWay SF 936	36°C	30-50°C	2-7%	1.18	9.5	Yes	+++	+++	++
CleanWay SF 1000	N.A.	20-80°C	1-5%	1.20	9.8	Yes	+++	+++	+
CleanWay SF 1150	50°C	45-70°C	3-6%	5.70	10.9	Yes	+++	++	-
CleanWay 111	55°C	20-60°C	1-3%	7.40	9.7	No	++	+	+
CleanWay 122	N.A.	20-80°C	2-5%	6.90	9.5	No	+++	+++	+
CleanWay 132	36°C	30-50°C	3-7%	5.10	10.0	No	+++	++	+
CleanWay 143	N.A.	20-80°C	3-10%	3.40	9.9	No	++	++	+
CleanWay ALK	>80°C	20-80°C	2-8%	4.54	11.3	No	+	+	+++

Symbols +++ Special developed for ++ Recommended + Works - Not recommended

Bear in mind:

Cast iron	Good rust protection is needed
Copper alloys	Passivators and pH max. 9
Free-cutting steel	Good rust protection is needed
Low alloy steel	Good rust protection is needed
High alloy steel	Passivators
Aluminium alloys	Low pH max. 9, or add inhibitors
Stainless steel	Might need passivators
Nickel alloys	Risk of contact allergy
Titanium	Low pH max. 9, or add inhibitors

Determining concentration through titration of total alkalinity (TA)



- Take 20 ml or weigh out 20 g of sample in a 250 ml conical flask, and dilute with water to approximately 100 ml.
- Add a few drops of methyl orange (0.1% methyl orange powder dissolved in distilled water).
- Titrate with 0.5N HCl (hydrochloric acid) while stirring, until you see a colour change from yellow to orange.
- Concentration is calculated by multiplying the volume of acid used in titration by the factor for the product.
- C = V*F
- C = Concentration in %
- V = Volume in ml of 0.5N HCl (hydrochloric acid)
- F = Factor for the product, shown in the table

General recommendations for handling cleaners

1. **Appoint someone to be in charge of cleaners.**
   - To check that there is the right concentration in the systems.
   - To keep a logbook of concentration and pH values.
   - To take corrective action to maintain the cleaner's optimum properties.
2. **Label the machines.** If you use different cleaners for different kinds of materials, label each machine with the type of cleaner used in that machine. This will reduce the risk of mixing products, which may compromise the cleaner's properties.
3. **Check that the concentration is correct.**
4. **Even topping up of concentrate/water.**
5. **Minimise tramp oil using skimmers and separators.**
6. **Continuous removal of swarf.**