



# METALWORKING FLUIDS

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High-Tech Products for the Metalworking Industry

# QUALITY AND PERFORMANCE

Water-soluble metalworking fluids are exposed to extreme conditions such as contamination from machine oils, high pressure, differing temperatures, diverse materials and very differing water qualities.

For that reason, the unique STRUB Stabillo Cut concept provides you with excellent long-term emulsion stability, longer tool life, the best possible surface finish for additional machine performance, as well as easy operational handling for all kinds of water hardness.



## Biobalanced Metalworking Fluids

### STRUB Stabillo Cut 1

Universal metalworking fluid for all cutting operations without the addition of any biocides. Applicable for milling, turning, drilling, etc. for all materials.

pH-value 5%: 9.2 | Refractometer factor: 0.90

### STRUB Stabillo Cut 2 EP

A biocide-free metalworking fluid containing a high proportion of additives which has excellent extreme pressure properties. For all cutting operations and especially for thread turning, reaming, punching and drawing of all kinds of materials as well as aluminum, stainless steel, high-alloy and tempered steels and non-ferrous heavy metals.

pH-value 5%: 9.2 | Refractometer factor: 0.94

### STRUB Stabillo Cool TM 1

Universal product for all cold tube-milling operations with cold-rolled steel, warm-rolled steel and high-alloy steel. This biocide-free product is also suitable for all CNC metalworking operations such as grinding, drilling, turning and milling.

pH-value 5%: 9.2 | Refractometer factor: 0.92

### STRUB Stabillo Cut YM PF

A phosphate-free metalworking fluid. Suitable for all metalworking operations and especially for the areas of non-ferrous heavy metals and copper alloys, and lead-containing ones too. It is suitable for all cutting operations such as drilling, turning, milling, reaming and sawing.

pH-value 5%: 9.2 | Refractometer factor: 0.98

## Deep-hole Drilling

is a demanding drilling operation. It is essential to have a metalworking fluid which does not tend to foam when under high pressure. Cooling and shaving removal must be guaranteed at all times.

## Drilling

requires a metalworking fluid with extraordinary lubricating properties. The heat and the shavings have to be quickly removed in order to guarantee high tool protection.

## Grinding

creates high temperatures. The metalworking fluid must have very good flushing and cooling properties for an optimal performance.

## Thread Turning, Forming and Turning

are complex operations which require the balanced use of additives. This serves to increase tool life and reduces costs.

## Milling

causes a lot of shavings which have to be carried away quickly. The metalworking fluid must have both excellent wetting abilities and good flushing properties so that the requirements can be managed efficiently.



## Biobalanced amine-free Metalworking Fluids

### STRUB Stabillo Cut AF EP

An amine-free universal product for all metalworking operations such as grinding, drilling, turning and milling. STRUB Stabillo Cut AF EP is for all metals such as steel, chrome, manganese and high-alloy steels, aluminum of the 5000 | 6000 | 7000 series, cast iron and lead-containing ones too.

pH-value 5%: 9.2 | Refractometer factor: 0.95

### STRUB Stabillo Cut AF EP Power

An amine-free metalworking fluid for all grinding and metalworking operations, particularly belt and disc where there are high demands placed upon the lubricating, flushing and cooling properties of the emulsion.

pH-value 5%: 9.0 | Refractometer factor: 0.95

# POWER & PRECISION

## Biostatic Metalworking Fluids

<b>STRUB Stabillo Cut Extreme</b>	Semi synthetic metalworking fluid based upon nanotechnology and possessing very universal characteristics. Besides enjoying a low consumption, STRUB Stabillo Cut Extreme is also biostatic with good resistance to microorganisms and fungi. Thanks to its excellent flushing and cleaning properties, the product is not sticky and is re-emulsifiable with water.
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pH-value 5%: 9.0 | Refractometer factor: 1.80

<b>STRUB Stabillo Cut Extreme EP</b>	Semi synthetic metalworking fluid based upon nanotechnology and possessing universal characteristics, as well as extraordinary extreme-pressure properties. Suitable for all cutting operations.
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pH-value 5%: 9.2 | Refractometer factor: 1.39

<b>STRUB Stabillo Cut Challenge</b>	Nanotechnological metalworking fluid with universal characteristics and high flushing and cleaning properties. Universal application for operations such as milling, turning, drilling and sawing of castings, for use with diverse steels and aluminum 6000-7000 series.
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pH-value 5%: 9.2 | Refractometer factor: 2.40

<b>STRUB Stabillo Cut 005</b>	STRUB Stabillo Cut 005 is a universal, user-friendly metalworking fluid with excellent lubricating properties.
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pH-value 5%: 9.2 | Refractometer factor: 1.61

## Biostable Metalworking Fluids

<b>STRUB Stabillo Cut ALB SW</b>	STRUB Stabillo Cut ALB SW is a universal metalworking fluid for use in all cutting operations such as: milling, turning, drilling, sawing, reaming and grinding in aluminum alloys 5000, 6000, 7000, low and high-alloyed steels, tool-steels, non-ferrous heavy metals in both soft and hard water.
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pH-value 5%: 9.2 | Refractometer factor: 1.40

<b>STRUB Stabillo Cut YM</b>	Vegetable ester based metalworking fluid for the whole spectrum of metalworking. The product is used where you need a really good lubricating effect. It is suitable for drilling, sawing, turning, milling and thread-turning for all regular metals, as well as for different plastics. It is also suitable for cutting glass.
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pH-value 5%: 9.2 | Refractometer factor: 0.97

<b>STRUB Stabillo Cut Heavy Duty</b>	STRUB Stabillo Cut Heavy Duty is a bio-stable metalworking fluid with the highest amount of additives for the highest of performance requirements. Suitable for all cutting operations and difficult grinding operations where the highest performance of chlorine-free lubrication is required.
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pH-value 5%: 9.2 | Refractometer factor: 0.90

## Fully synthetic Metalworking Fluids

<b>STRUB Stabillo Grind 15</b>	Universally suitable for all grinding operations like surface, round, centerless grinding and disc-grinding of all materials (steel, chrome, aluminum, non-ferrous heavy metals, etc.). STRUB Stabillo Grind 15 is most suitable for cyclone separators, belt-filters, etc. as well as for magnetic alloys such as NdFeB (Neodymium-Iron-Boron alloys).
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pH-value 5%: 9.2 | Refractometer factor: 3.25

<b>STRUB Stabillo Grind 11 EP</b>	Universally suitable for all grinding operations like surface, round, centerless grinding and disc-grinding of all materials, as well as for non-ferrous heavy metals also. It contains additional extreme pressure qualities for even more performance.
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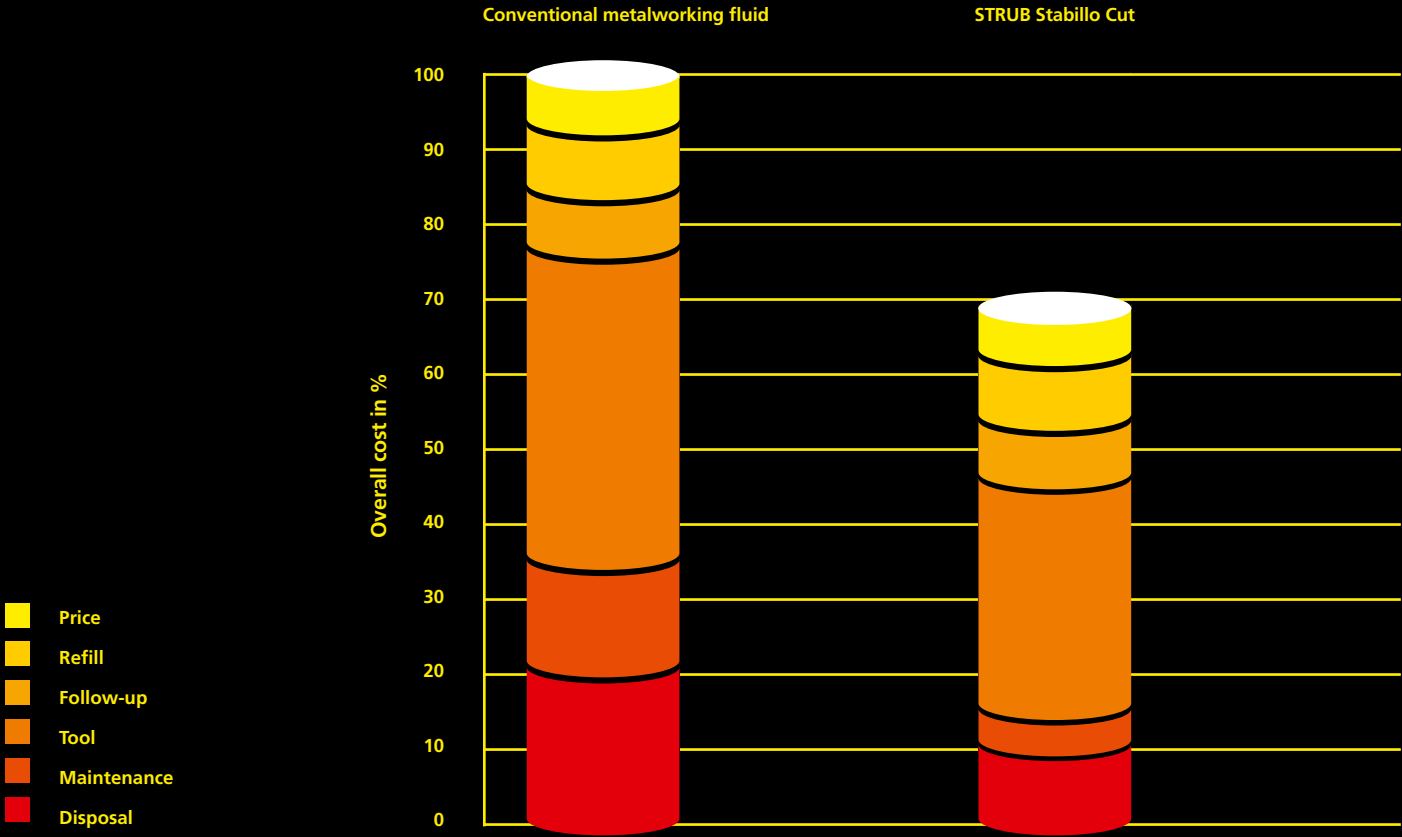
pH-value 5%: 9.2 | Refractometer factor: 3.38



# COST EFFECTIVENESS



Better Economic Efficiency due to Lower Overall Costs



## Better Surface Finish due to Optimized Additive Quality

Conventional metalworking fluid



Strub Stabillo Cut



## Longer Tool Life due to More Performance

Conventional metalworking fluid



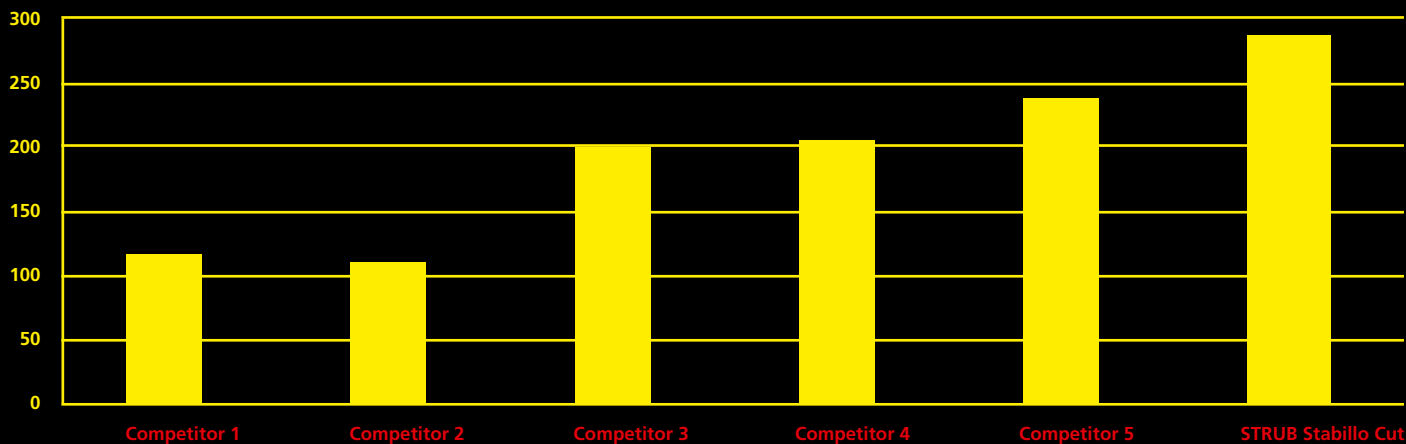
STRUB Stabillo Cut



(+ 25% more output in the same time period)

## Extended Stability due to Better Quality

Surface pressure in kg/cm<sup>2</sup> at p = 1500 g



5% Emulsion

# STRUB + CO AG

## Discover the World of Strub Lube

Since 1921, the name Strub has stood for quality, ecology and innovation in all areas of tribology. The basis of our success has been the principle of making use of our 90 years of tradition and experience in implementing innovative ideas. We aim to achieve high performance, reliability and environmentally-friendly solutions for our clients worldwide.

Our traditional family-owned company of Strub + Co. AG in the heart of Switzerland is an independent manufacturer of lubricants and technical cleaning agents. We have some 150 employees working in our business worldwide. Having branch offices and representatives in over 60 countries guarantees close proximity to our clients and the ability to react promptly to their specific needs.



### Analysis

In order to guarantee the optimum performance and functionality of your lubricants, we analyse them on your behalf. The products are tested with the most modern laboratory equipment as to their chemical and physical properties.



### Service

Our chemists and field-technicians stand ready to support you at all times. As your system supplier, we are close at hand and offer you our comprehensive customer support in respect of any questions or challenges you may face surrounding the topic of lubrication.



### Tailor-Made Products

In the event that you are unable to find the optimum product for your application in our list of over 1,600 lubricant specialities, we shall develop a tailor-made product for you.



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