hebrochemie

Stimuli for people and the environment

Premium coolants and metalworking fluids from hebro.

Product group overview.

Sicher mit hebro chemie – hebro® safe

Coolants.

The basics.

In many sectors of industry, the use of coolants is an essential part of production, in particular in the metal-working industry. State-of-the-art high-performance machining processes are simply not feasible without using coolants. They cool and lubricate the work site while purging chips and other debris from the workpiece, which is a valuable contribution to the high standards of today's production processes.

But there is still the crucial question as to which lubricant is the right one. After all, every material to be machined makes its own demands on the lubricating coolant. And this is why there are different products to meet the needs of each individual machining process – depending on whether cooling, lubricating or rinsing action is required.

As an option, it is possible to select a product that contributes to corrosion protection.
The products are guaranteed to be not only environmentally compatible but also in line with health needs and feature good shelf lives.

Premium coolants from hebro chemie meet all the currently applicable technical requirements for hazardous substances, they also fulfil the latest VDI guidelines.
They are water miscible and will deal with every potential application and all requirements. We call them „premium" because every single one of them incorporates the combined knowledge and skill of our company, gathered from decades of experience and uncompromising customer focus.

Our customers know this. They know they will get reliability and safety at a consistently high level.
With every single hebro product.

So it is hardly surprising that coolants made by hebro have been in use for many years in machines made by renowned manufacturers and are listed in numerous machine manuals. We can make these listings available on request.

Facts worth knowing about **hebro**®lub coolants.

Product advantages that count.

By using hebro®lub made by hebro, customers are benefiting from coolants that contain special emulsifiers to ensure their miscibility with water. They also contain corrosion protection substances, defoaming agents and lubricant additives formulated for the specific machining task.

Water miscible coolants made by hebro chemie provide many benefits when used correctly:

- Good cooling and rinsing effect and minimum cleaning effort required for tools, workpieces and chips.
- Extended service lifetimes and reduced tool wear.
- Longer service lifetime of the machine tool.
- Excellent corrosion protection.
- Reduced disposal and process costs (wages and downtimes).
- Low initial outlay for first filling and top-ups.
- Excellent maintenance properties due to easy filtering.
- Minimised carry-out losses – so much reduced need for top-ups.
- High degree of work safety and improved health awareness since no chlorine-based additives are used. Amine and/or boron free products can be supplied on request.
- Reduced vapour and mist in use.
- Pleasant odour and excellent skin compatibility.
- Use of pure, environmentally friendly raw materials and special EP additives. One consequence of this is that standard sealing materials and machine paints (2-component paints) are, according to our experience, not subject to attack (in accordance with VDI guidelines 3035).

  Slideways and machine parts do not become tacky or stick together.

  The rinsing and dirt binding actions result in a much extended lifetime of the machine tools, tools and workpieces.

Change to **hebro**®lub today.

Increased efficiency in three steps.

hebro coolants stand out because of the long service lives they generate. When changing to hebro coolants, the following points should be noted:

Remove

- Where installations are heavily or severely soiled, old emulsion must be completely removed from the emulsion tanks, piping etc. Chips, swarf, deposits and sludge have to be removed from all containers, conveyor belts, feed screws and other parts of the machinery.

Clean to DGUV-Regel 109-003 (to BGR/GUV-R 143)

- A number of methods are available for cleaning activities. Ideally, the most effective approach will depend on the type of machinery affected and the degree of soiling.
  The specialist staff at hebro chemie will be pleased to assist you.
  Slightly soiled equipment can be effectively cleaned with biocide-free hebro®pure OK-M. Simply add 2 - 5% hebro®pure OK-M to the existing emulsion or grinding solution and run the recirculating pump for 12 to 24 hours. Then drain off the solution, rinse thoroughly and refill.
  If the installation is heavily or severely soiled, it is essential first to drain off all the old emulsion, as described above. Then add a fresh 1% emulsion of hebro®pure OK-M system cleaner to the empty system and, where necessary, a biocide from the hebro®cid series* made up as a 5 - 10% dose and pump this cleaning emulsion through the system for as long as required. After draining the emulsion, rinse the system as described above. The installation can then be refilled.

Make new batch

- As soon as the cleaning process has been completed, the clean system should be refilled with fresh emulsion. We recommend always using a coolant mixer as this ensures best possible emulsion. When refilling, ensure the correct concentration is achieved. When mixing the emulsion, do not use demineralised water. Ideal water hardness levels lie between 7 and 15° dH. This emulsion must never be mixed with other emulsions. After filling the system, reset the mixer to the optimum concentration required for topping-up.

*Use biocides with great care. Before use, always read the label and product information.

Trust, but verify.

Regular monitoring and refreshing of **hebro**®lub coolants.

To ensure a long service lifetime of the hebro coolants, we recommend you adhere to the in-process testing and maintenance intervals. Specific action to be taken:

Concentration measurement

- Regular measurement of the emulsion on-site with a handheld refractometer. In a laboratory, acid cleavage is also possible.
- If the emulsion concentration is too high, dilute it by adding a less concentrated emulsion. Never just add pure water!

Measuring pH value

- Measure with litmus paper or pH indicators (6.5 - 10).

Microbiological analysis

- If necessary, use bio test tubes. Refer to our detailed instruction manual for handling and evaluation.

Nitrite & nitrate measurement

- Use of diagnostic dipsticks. Refer to our detailed instruction manual for handling and evaluation.

Remedial action

- Maintenance and care products such as biocides*, corrosion inhibitor solutions and water hardeners should only be used after accurate analysis and investigation of the causes. Oil floating on the surface (leakage) should be removed using an oil skimmer.

Process optimisation through adjustment

- Requirements in industry and production environments tend to differ from one company or industry to another. As well as the right coolants, hebro provides expertly balanced maintenance and care products and further additives:
  - **hebro**®cid* preservative
  - **hebro**®add to prevent cutting fluid emulsions foaming in soft-water regions
  - **hebro**®protect as corrosion inhibitor for steel.
  - **hebro**®pure* series as a system cleaner
  - **hebro**® oils for machine base slideways, hydraulic systems, gearboxes, spindles and other similar applications
  - Additional accessories:
    Cutting fluid mixers, handheld refractometers, pH value meters, oil skimmers, bio test tubes, pH diagnostic dipsticks, nitrite indicator strips etc.

Our services – more safety for you.

We continue to support you after you have purchased products from us.

Both the authorities and statutory accident insurance companies require users to document the technical state of their cutting fluid emulsion. hebro provides a comprehensive service pack that makes this chore a simple matter.

Laboratory service

- Regular inspection of coolants in our state-of-the-art laboratory.
- Measurement of emulsion concentration, nitrite and pH values and other customer-specific readings.
- Drawing up a laboratory report and analysis of the state of the emulsion.
  This laboratory report can, if requested, also contain details of these points:
  - corrosion (chips/filter, test to DIN 51360/2)
  - conductivity
  - water hardness
  - odour
  - foaming
  - microbial problems caused by bacteria, yeasts and fungi
  - copper content
  - ...

Product Management

- Appropriate limit values are defined by TRGS 611 and DGUV-Regel 109-003 (BGR/GUV-R 143).
  In the event the customer has problems staying within the prescribed limit values, we can help with the choice of adjustment measures to be applied and with their implementation.

Action times

- Continual checks can result in much increased action times for the coolants - they can even be doubled.
  The result is reduced process costs and less contamination in the environment.

In conclusion, economy and ecology at the highest level.

Profit in many ways from **hebro**®lub coolants made by hebro.

hebro®
Guaranteed Premium Quality
Made in Germany

Place your confidence in tried-and-tested coolants made by hebro chemie and reap multiple benefits – thanks to our excellent reliability and product safety that are designed to enhance the profitability of both your project and your company.

This is achieved through ease-of-use which focuses on human health, on the one hand and the use of environmentally-friendly ingredients that enable you to make an active contribution to environmental protection – without lifting a finger.

Every single day.

Further information is available from these sources:

- on-site advisory visits by our field safes staff
- specific, technically-orientated product literature
- our website: www.hebro-chemie.de
- via our telephone consulting service on +49 2166 6009-133

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Stimuli for people and the environment

hebro quality products relating to
Coolants and metalworking fluids

hebro®lub series	State-of-the-art, universally applicable, water-miscible high-performance coolants
hebro®grind series	Fully synthetic, water miscible grinding coolant
hebro®pure series	System cleaners for all machine tools
hebro®cid*	Disinfectants for coolants in an aqueous solutions
hebro®base oils	High-performance oils for various applications (cutting oils, machine base slideways, gearboxes, hydraulic systems, spindles and many others)

More products and aids for metalworking on request.

Find out more about the other hebro product groups. You won't be disappointed.

- **Paint detackification products and water treatments**
- **Cleaning and care products**
- **Maintenance and repair products**

Your partner for quality products from hebro:

Do you have any questions?
Just ask us:

hebro chemie –
Branch office of
Rockwood Specialties Group GmbH
Rostocker Straße 40
41199 Mönchengladbach, Germany
PO Box 300242
41192 Mönchengladbach, Germany
Phone +49 2166 6009-0
Fax +49 2166 600999
info@hebro-chemie.de
www.hebro-chemie.de