

Innovative lubricants need experienced application engineers

Every lubricant change should be preceded by expert consultation on the application in question. Only then can the best lubricant system be selected. We will be happy to advise on the right lubricant or cleaner for each application and also the range of support services we can offer.



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Quenching Fluids

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LUBRICANTS.
TECHNOLOGY.
PEOPLE.



YOUR PERFECT PRODUCT PARTNER

FUCHS is a full line supplier of lubricants and provides customers with local manufacturing, first class logistics and specialist technical support. We research, develop and manufacture bespoke lubricants, technology that is approved for use by leading manufacturers and available globally via the FUCHS organisation.

We specialise in developing products for extreme tribological problems. Our quenchants generate a residue free surface finish, enable high dimensional accuracy and reduce the formation of stress cracks.

At FUCHS, we believe that the perfect lubricant partner should not only supply high performance lubricants, but also provide service and support to customers. Our experienced team work closely with customers, and can assist with product solutions for difficult application areas such as martempering and cooling crack-risk materials.



THE FUCHS GROUP

FUCHS is the world's largest independent lubricant manufacturer. The Group comprises of 55 operating companies with 34 production plants worldwide.

In addition to products developed for industry in the UK, we have access to more than 2,500 industrial FUCHS products from within the Group. Customers can make use of FUCHS' technical expertise and product availability on a global scale, providing access to international fluid technology.



UK GROUP PROFILE

The headquarters of the UK subsidiary is located at our modern, highly automated production plant in Stoke-on-Trent. Our UK manufacturing site carries all the necessary approvals required including BSI AS 9100, ISO 9001, ISO 14001, ISO/TS 16949 and OHSAS 18001.

FUCHS is a full line supplier of lubricants and provides customers with local manufacturing, first-class logistics and specialist technical support.



RESEARCH & DEVELOPMENT

The FUCHS Group has a very strong focus on R&D with more than 400 chemists, engineers and specialists in more than 40 laboratories worldwide. Our labs are extremely well equipped and audited to the highest levels, having state-of-the-art equipment and highly trained staff with extensive technology and application knowledge.

Regular dialogue with OEMs, other industry bodies and component suppliers maintains technical advantages. Our continued investment ensures that we are at the forefront of lubricant technology.



TECHNICAL SUPPORT

With our industry leading experience in lubrication and chemical processes, FUCHS is able to provide customers with unparalleled products and services through focused engineering, administrative and technical support. Our business support solutions include a UK based customer service team, local customer account managers, as well as experienced technical engineers and product specialists.

We work closely with our customers to choose the right quenchant for the application. Our in-house R&D facilities enable us to develop bespoke fluids where necessary to meet the exact requirements of your operation.

QUENCHING OIL SOLUTIONS



MINERAL OIL BASED

Our **THERMISOL QH MC** range of quenchant is based on high quality hydro-cracked oils with a low level of evaporation. Within the Molecular Conversion (MC) process, standard mineral oils are converted by a chemical reaction with hydrogen under high pressure and temperatures. The result of this hydro-cracking is a relatively inexpensive mineral oil based quenchant that is comparable in performance to more expensive synthetic quenchant.

THERMISOL QH 10 MC

Recommended for forgings directly from the forge heat, tempering of wrought materials, screws and springs.

THERMISOL QH 30 MC

Recommended for low alloy heat-treated steels, tool steels, forgings, and gearbox components.

THERMISOL QH 40 MC

Recommended for use in multi-purpose furnaces, gas carbonisation lines and vertical retort facilities.

SYNTHETIC

Environmentally friendly, thermally stable, mineral-oil free quenchant. **THERMISOL QHY** products have a considerably higher flashpoint than equiviscous products based on mineral oil, therefore there is less evaporation. Synthetic quenchant also provide easier cleaning than mineral oil based products.

THERMISOL QHY 10

Low viscosity product to minimise drag out losses. Recommended for applications such as screws, springs, chains, hand tools and mass produced components that are difficult to harden.

THERMISOL QHY 150

Recommended for applications such as gearbox components, ball bearings, and needles. Rapidly biodegradable.

MARTEMPERING OILS

Martempering is a heat treatment for steel involving the immersion of the austenised metal part into a bath at a temperature just above the martensile start temperature (Ms). The cooling is stopped at a point above the martensile transformation region to ensure sufficient time for the centre to cool to the same temperature as the surface. Martempering allows control over the high stresses generated during the quenching process.

Our products are highly age resistant with a high flashpoint and low evaporation losses. Principally recommended for martempering processes of alloyed constructional and tool steels that are prone to distortion.

THERMISOL QH 120

Designed for use at temperatures between 60°C and 170°C.

THERMISOL QWA 460

Designed for use at temperatures between 150°C and 270°C.

POLYMERIC SOLUTIONS

Quenching oils provide good cooling performance, but there's still a marked difference between the cooling rate of a low viscosity oil and using water. Polymeric quenchant are water-based solutions, which can help reduce this problem – they are ideal for use where there is a risk of fire or where cooling with an oil would not be sufficient.

THERMISOL QZS 700

Provides a strong film on the material surface, which controls the heat dissipation of the material. Suitable for quenching by spray system of induction hardened materials. Concentration: 5 – 7%

THERMISOL QZS 400

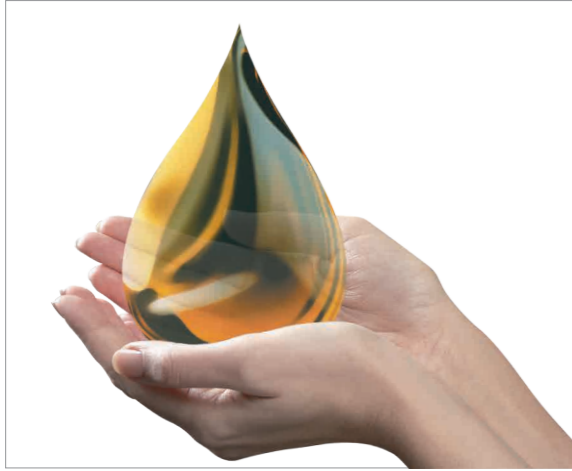
High thermal resistance, a low grade of foam and provides excellent corrosion protection. Designed for quenching by spray system of induction hardened materials, particularly crack-risk materials. Concentration: 5 – 7%

THERMISOL QZS 150 MM

Developed as an alternative to low viscosity quenching oils, for sectors with high safety and hygiene requirements. For higher alloys and forged parts like turbine rotors, hydro shafts and large axles. Concentration: 12 – 15%

THERMISOL QZS 550 CPO

High viscosity product with optimised cooling performance, designed for specialist processes where a ferritic-banite structure is required. Concentration: 7 – 10%



CHOOSING THE **RIGHT PRODUCT**

We can help manufacturers choose the ideal quenchant for their process. There are a number of factors to be considered when selecting your quenchant, including: component geometry, furnace equipment, hardenability of steel, quenching speed and compatibility with subsequent processes.



INNOVATIVE **SOLUTIONS**

We are continually developing and testing new products in our laboratories to meet the ever increasing demands of operators. Our introduction of **THERMISOL QZS** polymeric-solution quenchants provides customers with the latest in lubrication technology.



COMPATIBILITY

The metalworking process involves many complex steps that are interdependent and carefully matched. Cross-compatibility of lubricants and cleaners is monitored in our state-of-the-art research facilities and laboratories. Our quality checking guarantees a reliable process chain starting with forging, forming and metal cutting through to cleaning, corrosion protection and coating.



TECHNICAL **SOLUTIONS**

Whether you're experiencing problems with excessive drag out, inadequate hardness or distortion – our team of experts can help you find the right solution. We work closely with customers from selecting the right lubricant for the application to providing employee training on fluid maintenance and best practices.

*decades of experience,
technical expertise and
global approvals from
leading manufacturers
makes our product
programme unique...*



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