QCare

Technical services and support for metalworking fluids & industrial lubricants
Welcome to QCare smart support
QCare

The Q8Oils brand of technical service is designed to help our customers get the most out of Q8 products, optimising your processes and ensuring a safe and operator-friendly working environment.

Q8Oils is well known for our industry-leading range of high-quality metalworking fluids. But we are far more than just a manufacturer and pride ourselves on the high level of support we offer our customers. Through our QCare service, we offer a wide range of technical services to help you get the most from your Q8Oils products.

The risks involved in working with metalworking fluids is under the spotlight of the Health & Safety Executive and we can guide you on the latest legislation and provide support in how to use our products safely.

Our Technical Services team will work with you to optimise performance and resolve any technical issues. We also offer training seminars and a range of high-quality equipment solutions.

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**Health & Safety support**  
Page 4  
An experienced and knowledgeable team that can advise and help you meet national and international health & safety requirements

**Fluid management**  
Page 7  
A dedicated on-site service where an Industrial Application Specialist manages your MWF’s in the machine

**Q8 analytical services**  
Page 10  
Performance testing to identify wear, contamination and additive levels of your MWF or lubricant

**Training & technical support**  
Page 12  
Knowledgeable expert advice to guide and assist with any problems and a dedicated suite of on-site training packages

**Equipment solutions**  
Page 14  
Equipment to facilitate the optimal use of MWFs and other industrial lubricants

**What our customers say**  
Page 15  
Working in collaboration with our team of experts to deliver product and equipment solutions for process improvements
As a leading manufacturer of metalworking fluids, Q8Oils is committed to supporting our customers in working safely with these fluids and ensuring you are aware of the latest legislation.

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**Health & Safety support**

As a leading manufacturer of metalworking fluids, Q8Oils is committed to supporting our customers in working safely with these fluids and ensuring you are aware of the latest legislation.

**Did you know?**

You must keep records in accordance with COSHH requirements:

- Fluid monitoring checks and LEV maintenance: 5 years
- Records of exposure to hazardous substances and employee health records: 40 years
You can achieve adequate control to exposure by:

- carrying out a risk assessment and identifying measures to minimise exposure
- using the most appropriate product
- providing adequate local exhaust ventilation (LEV)
- conducting and recording a fluid monitoring programme

Your duty of care

The Health & Safety Executive (HSE) has identified that exposure to metalworking fluids can be hazardous to the skin, eyes and more critically to the airways and lungs, potentially resulting in serious respiratory diseases.

As an employer, you have a duty of care to take adequate measures to protect your operators from this exposure. This is enforced by law under The Control of Substances Hazardous to Health Regulations (COSHH) 2002.

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- using the most appropriate product
- providing adequate local exhaust ventilation (LEV)
- conducting and recording a fluid monitoring programme

HSE Inspection programme

In 2017 the HSE announced plans for a proactive inspection programme for workers who are exposed to asthmagens and/or carcinogens generated during production. A main area of focus is metalworking fluids.

The inspection checks ensure that control systems are in place, that reasonable measures are being taken to reduce exposure and the required records are kept.

How Q8Oils can help

Q8Oils works closely with the HSE. We are a key member of the UKLA MWF Guidance Advisory Panel, which includes experts from the HSE, health and safety laboratories and industry.

We can help you choose the most appropriate metalworking fluid for your application, balancing efficiency, safety and offer advice to help you comply fully with HSE regulations. We can provide assistance with fluid condition monitoring and give general advice on applications, as well as help with responding to any issues. We have produced a pocket guide to help you understand the risks involved and the measures that should be taken to manage them in accordance with HSE guidelines.
Guidance on the safe use of MWFs

Following simple guidelines will help minimise the risks associated with exposure to MWFs. These steps will also help maintain fluid quality, which will extend fluid life in protecting both the machine and finished parts, leading to a reduction in overall costs.

General
- refer to the Safety Data Sheet
- conduct a risk assessment
- maintain records of local exhaust ventilation, fluid monitoring and employee health
- regularly check for dermatitis and respiratory problems and report symptoms promptly
- store packages and drums correctly
- provide training and instructions for employees in the safe use of MWFs and correct use of Personal Protective Equipment (PPE)
- use PPE when handling MWFs and when cleaning out machines

Machine operation
- provide and maintain local exhaust ventilation
- follow correct working procedures
- allow a time delay before opening machine enclosures
- ensure correct MWF flow and delivery
- use machine guards and spray covers properly
- observe good personal hygiene
- avoid using compressed air

Fluid maintenance
- ensure personnel responsible for MWF maintenance are trained
- conduct regular monitoring of MWFs
- record and act on the MWF condition monitoring results
- use a refractometer to check the MWF is at the correct dilution
- mix MWFs and top-up sumps correctly
- keep the machine and surrounding area clean
- keep the MWF tank covered
- use filters to remove swarf and fines
- remove tramp oil regularly using appropriate equipment

Cleaning
- use a system cleaner compatible with the MWF
- thoroughly clean sump, pipework, machine and guards before re-filling with fresh MWF
- use a clean reliable source of water

Not all the points are specific legal requirements, but each point can help employers comply with the COSHH Regulations. If in doubt, contact your MWF supplier.
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Fluid management

Choosing the correct product with the right balance of safety and performance is an important step in improving productivity and ensuring the protection of employees.

It is important to understand that when in use the composition of a MWF will change. This can include both chemical deterioration and contamination (such as tramp oil) and also microbiological contamination.

It is therefore critical to monitor MWFs to maximise product performance and ensure health & safety requirements are met. A full fluid condition monitoring programme is the best way to achieve this.

Conduct and record a fluid monitoring programme

<table>
<thead>
<tr>
<th>Measurement</th>
<th>How</th>
<th>Frequency</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid appearance and general condition</td>
<td>Visual and odour</td>
<td>Daily</td>
<td>• does anything look or smell different?</td>
</tr>
<tr>
<td>Concentration</td>
<td>Refractometer</td>
<td>Minimum weekly</td>
<td>• it is advisable to conduct a quick daily and record at least weekly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• check the concentration is within the recommended product parameters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• remember to always use the refractometer conversation factor when calculating the concentration</td>
</tr>
<tr>
<td>pH</td>
<td>pH meter</td>
<td>Minimum weekly</td>
<td>• check the pH value is within the recommended product use range</td>
</tr>
<tr>
<td></td>
<td>pH strips</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microbiological contamination</td>
<td>Dipslide</td>
<td>Weekly unless consistently &lt;10^4CFU/ml</td>
<td>• frequency can be reduced if previous results and other parameters (pH &amp; concentration) demonstrate the fluid is under control</td>
</tr>
<tr>
<td>Tramp oil</td>
<td>Measuring cylinder or visual check</td>
<td>Minimum weekly</td>
<td>• tramp oil should be kept to a minimum</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• when checking visually, a full layer of oil would usually indicate &gt;2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• use a tramp oil skimmer or absorbent mats</td>
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</tbody>
</table>

As a global supplier of soluble and neat MWFs, Q8Oils can advise and assist you regarding the best way to install an efficient and adequate fluid monitoring programme.

Various measurements are recommended to ensure the long-term stability of a MWF. The table above highlights the most important factors when considering the associated health risks.
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Fluid M8

On site analysis

Our field based Industrial Application Specialists are on hand to help you minimise unscheduled maintenance, increase coolant life and optimise performance, resulting in improved productivity and reduced machine downtime.
Fluid M8 enables Q8Oils Industrial Application Specialists to monitor fluids, complete audits and deliver the results whilst still on your site. Our specialists can assist you to identifying any problems and help to correct them.

Once all checks are completed, a report will be displayed demonstrating the current condition of the fluid in each machine.

Our easy to follow reporting system helps you identify fluid condition and when to take action. All the results are displayed using a simple traffic-light system.

Traffic-light system

- Fluid within recommended parameters
- Caution: fluid should be monitored further and action may be necessary
- Action required

Fluid M8 is a user-friendly, fully-automated system using graphical charts and reports showing the full history of each metalworking fluid system.

You can log on to the Fluid M8 system using your own smartphone, tablet or desktop computer and view a full historical report at any time and share it with colleagues.

The combination of highly-trained Q8Oils Industrial Application Specialists and Fluid M8 will enable you to:

- Streamline your metalworking operation
- Significantly reduce operating costs
- Increase tool life
- Improve production rates
- Reduce coolant usage
- Improve operator acceptability
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Analytical solutions

Oil analysis is the best tool for early detection of wear in your machinery. Frequent analysis can help prevent serious damage or breakdowns by showing what action you need to take. Detecting problems early helps to avoid repair costs or downtime, saving you money.
Q8Oils Used Oil Test Analysis

Where further investigation is needed, or as part of routine monitoring, samples can be sent to a fully accredited laboratory which uses advanced testing facilities to evaluate the performance of your lubricant or MWF. Testing suites include the latest organic and inorganic spectroscopic techniques plus physical and chemical properties which are critical in providing a lubricant or fluid health check.

Benefits

- Monitors oil condition to predict fluid lifecycle
- Helps to detect problems early
- Enables effective maintenance planning
- Reduces operating costs
- Reduces machine downtime

You will receive a report with a detailed analysis of your oil and any wear to your machine. A traffic-light system – green for normal, amber for caution and red for serious – shows at a glance the condition of your oil and we can recommend what action you need to take.

Frequent oil analysis helps prevent serious damage or breakdowns by indicating what action should be taken and how urgent the action is. QUOTA provides preventative maintenance by analysing problems statistically and indicating their causes. This reduces repair costs and avoids downtime.

Q8Research

Established 50 years ago, Q8Research is a world leader in petrochemical and lubricant research. Its activities encompass new product development, specifications for products and legislation compliance. Q8Research also provides product testing, certification and quality control services.

50 years of petroleum research and development
40+ scientists and support staff
ISO 9001, OHSAS 18001, ISO 14001 & RC 14001 certified
Tested 50,000 samples and 350,000 analyses every year

Other analysis

In addition to condition monitoring and routine analytical testing, Q8Oils’ global network of research and testing facilities is designed for more in depth investigative analysis of all our lubricant product ranges.

This includes:
- analytical testing
- performance and tribology

Analytical testing

- viscosity and rheology properties
- physicochemical properties (TAN, TBN, flashpoint, water)
- organic spectroscopic (GC, HPLC, FTIR)
- inorganic analysis (ICP, AAS, XRF)
- thermogravimetric analysis (TGA)
- oxidation / ageing
- lubricant tribology testing
- microbiological analysis

Performance & tribology

- lubricity
- tapping Torque, Reichert, 4ball, Cameron plinth
- foam testing
- emulsion / hard water stability
- stain testing
- corrosion
- tramp oil splitting
- microbiological challenge testing
We appreciate that when you need technical support, it must be fast and easy to access. Whatever your query or problem, we offer a range of options to give you expert advice.

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Training & Technical support

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Q8Oils Industrial Application Specialists

Our highly-experienced field based industrial technicians will help you get the most out of our lubricants and MWFs. They can offer guidance on the best product for your application and how to work safely and in compliance with HSE regulations.

They work with you to increase the life of your tooling and machinery, to reduce maintenance costs and ultimately increase profitability.

Technical Help Desk

Whatever your problem or query, our expert team is there to provide support to you.

Our technical experts can recommend the best product for your application, verify OEM approval of our products, provide product information, give guidance on health and safety – and much more.

Open Monday to Friday: 08:30 to 17:00

T: 0113 236 5223
E: techdesk@Q8Oils.com
Q8Oils Hub is a blog platform that keeps you in touch with the latest developments in the industry. Our blog is regularly updated with articles related to the metal manufacturing, automotive, general industry and energy sectors. Our technical experts share their knowledge with you and offer advice. We will also tell you about new Q8Oils products that could benefit you.

It is a great way to keep up to date and find out more about important topics.

Customer training

We offer a range of training seminars, each run by an experienced Q8Oils technical specialist, to help you work safely and efficiently with metalworking fluids.

Training can be catered to your individual needs and delivered on site.

**Seminars include:**

**Introduction to MWFs**
- what are metalworking fluids?
- metalworking fluid types
- functions of a metalworking fluid
- summary of MWF composition
- application of MWFs
- MWF selection criteria
- impact of legislation on MWFs

**Guide to working safely with MWFs**
- the risks associated with exposure to MWFs
- HSE legislation
- MWF condition monitoring and guidance
- MWF maintenance and machine cleanout guidance

**Q8Oils equipment solutions**
- advice and guidance on equipment solutions
- accurate mixing systems
- tramp oil removal
- low cost MWF reclaim
- swarf removal / fluid cleaning
- oil filtering
- swarf processing
- water treatment

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**FLUID FORCES - case study**

Q8Oils Hub is a blog platform that keeps you in touch with the latest developments in the industry. Our blog is regularly updated with articles related to the metal manufacturing, automotive, general industry and energy sectors. Our technical experts share their knowledge with you and offer advice. We will also tell you about new Q8Oils products that could benefit you.

It is a great way to keep up to date and find out more about important topics.
At Q8Oils we are much more than just an industrial lubricant supplier. With a comprehensive inventory of equipment solutions and dedicated technical personnel, we can further support your operations in optimising process efficiency. Equipment requirements are often overlooked, which can be counter productive to the safe use of MWFs.

Another important factor is the significant benefit that correctly selected equipment can bring to your process, by reducing costs and waste generation. Smart equipment solutions go hand in hand with manufacturers working to implement effective environmental management systems such as ISO14001 and OHSAS 18001. Q8Oils can recommend, assist and supply equipment suitable for monitoring and maintaining MWFs. From mixing units to fluid recycling systems we have a solution for every scenario.

Below, we recommend equipment suitable for meeting the minimum fluid monitoring requirements advised by the HSE.

### Manufacturing equipment from Q8Oils

#### Fluid management control kit

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Refractometer</strong></td>
<td>Determines the concentration of the metalworking fluid</td>
</tr>
<tr>
<td><strong>pH indicator strips</strong></td>
<td>Measures pH level, indicating the chemical acidity or alkalinity on a scale of 1-14</td>
</tr>
<tr>
<td><strong>Incubator</strong></td>
<td>Incubates dipslides at controlled temperatures for accurate results</td>
</tr>
<tr>
<td><strong>Dipslides</strong></td>
<td>The most frequently used method of measuring microbial activity</td>
</tr>
</tbody>
</table>

**Fluid maintenance**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tramp oil removal (Skimmer)</strong></td>
<td>Combats the problems associated with tramp in machine tool coolant systems</td>
</tr>
</tbody>
</table>

**Machine cleaning and waste management**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vacuum Equipment</strong></td>
<td>Rapidly removes and regenerates MWFs from machine tool sump systems</td>
</tr>
</tbody>
</table>

**Soluble MWF mixer unit**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mixer unit</strong></td>
<td>Easily and accurately dispenses MWFs with built in WRAS-approved backflow prevention</td>
</tr>
</tbody>
</table>
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What our customers say

Many of our customers benefit from the wide-ranging support that Q8Oils provides.

Paul Fairbrother, Sales Director
Fair Hydraulics & Pneumatics

“The product selection is key as it has to suit the application and with the Q8Oils technical team this is always assured. Additionally we are able to give our customers peace of mind because the QCare service offers condition monitoring, health & safety advice and on-site technical support. Basically it’s a full support service, with highly-trained Q8Oils engineers. Not only do we get the correct product for the application, we make sure it stays that way with QCare.”

Charles Smith, Machine Shop Manager
Technoturn Limited

“We receive regular technical support from our Q8Oils Industrial Application Specialist who works with our operators to ensure they are using products correctly and that we are optimising usage to extend product life.”

George Corbett, General Manager
Belmar Engineering Service

“We have been supplied by Q8Oils for a number of years. We have always received excellent technical service from our Q8 Industrial Application Specialist – this service covers condition monitoring, health & safety, onsite technical support and advice. Q8Oils has recommended products, provided our management and operators with training programmes, consultation in regards to HSE matters and helped when we were in need of equipment. We believe in the value of QCare which helps to increase the life of our machinery, reduce maintenance costs and ultimately increase profitability.”