



AEROSPACE



# Shaping the Future of Aerospace. Together.

HOCUT® 4260 Water soluble metalworking fluid - product guide





## **The Global Leader in Process Fluid Solutions for the Aerospace Industry.**

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Aerospace companies face challenges today as never before. Under growing pressure to increase productivity and throughput, reduce environmental impact, they are also dealing with new highly engineered materials creating new requirements in manufacturing processes and metalworking fluids. At this critical point in time, we are the long-term partner for manufacturers seeking to anticipate—and overcome—these challenges. We are committed to offering innovative solutions to help our aerospace customers run more efficiently today and reap the opportunities of the future.

### **Applied Intelligence: The Quaker Houghton Difference**

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Our team of industry and technology experts work closely with your team to solve complex manufacturing challenges. In an increasingly competitive industry, we are the partner you can trust to prepare you for the future based on extensive knowledge of your unique operating environment and goals. We provide on-site expertise that maximizes quality, performance, and safety. With Quaker Houghton products and our team of industry experts, you can:

- Increase productivity and maximize your throughput due to extended tool life and reduced downtime
- Utilize new, ultra-high speed and high-pressure equipment to meet your productivity goals
- Produce high quality parts made with new light weight, high strength special alloys
- Improve safety and environmental impact; reduce waste, energy and water consumption

### **We Never Stop Improving. So You Can Continue to Succeed**

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Quaker Houghton is a partner in progress to the world's most successful aerospace companies.

Whether leveraging the potential of the Internet of Things or responding to changing demand for materials, manufacturers need to constantly evolve to continue to grow and deliver even greater value to their customers.

With research and development centers around the world, Quaker Houghton develops new products using state of the art equipment and scientific methods so that our aerospace customers can stay ahead in a changing world.



# HOCUT® 4260

## Metal Removal Fluid

### Advanced, High Lubricity Metalworking Fluid

HOCUT® 4260 is an advanced technology metal removal fluid, part of the HOCUT® series technology family.

HOCUT® 4260 is a boron-free and formaldehyde-free emulsion technology giving very long sump-life.

A special lubricity additive package gives greatly enhanced machining performance and extends tool life compared to conventional products.

HOCUT® 4260 is multi-metal compatible and is recommended for machining applications including high speed milling, drilling, turning and grinding on a wide range of materials including aerospace aluminium alloys, composites, ferrous alloys, high strength steels, titanium, Inconel and magnesium

Its non-staining and corrosion-free properties make HOCUT® 4260 particularly effective on machining aerospace airframe structural components in aluminium alloys, titanium and carbon-fibre composites.

		MACHINING		
		Low	Medium	High
WATER	Hard	●	●	●
	Medium	●	●	●
	Soft	●	●	●

### Key Benefits

- Lower operating concentrations reduce consumption
- Excellent stability and extended sump life
- Excellent cleanliness of machines and parts produced
- Enhanced protection against risk of staining and galvanic corrosion
- Multi-metal machining compatible
- Able to machine Magnesium- approved by Safran Aircraft Engines
- Extended tool life
- Wide aerospace industry approvals
- Covers all aerospace applications and materials allowing 1 product per facility

### Properties

PROPERTY	TYPICAL VALUE	UNIT
Appearance	Pale yellow	
Emulsion aspect	Microemulsion, translucent	
pH in use	9.5	
Density at 200°C	0.986	g/cm <sup>3</sup>
Refractometer factor	1.5	
Acid split factor	2.1	



## HOCUT® 4260 Features

- **Versatile:** Proven across a wide range of materials from carbon fibre composites to aerospace aluminium alloys, steels, titanium, Inconel and even magnesium.
- **Extended tool life:** Unique anti-wear package minimises tool wear and reduces tooling costs
- **Excellent EHS Profile:** Boron, formaldehyde, chlorine and phenol-free. Contains only TRGS 611 approved amines.
- **Inhibits aluminium staining:** Suitable for sensitive aerospace alloys and airframe structures.
- **High detergency:** Leaves parts and machine tools clean and free from residues.
- **Highly Stable Emulsion:** Fewer additive treatments and lower usage costs.
- **Very long sump life:** HOCUT series emulsion technology extends intervals between clean outs.
- **Low foaming:** Ideal for the highest speeds and pressures in soft to hard water (0 – 1,250 CaCO<sup>3</sup> PPM)

## Approvals & Conformities

HOCUT® 4260 is one of the most important aerospace industry metalworking fluids holding approvals for:

- Airbus AIPS 00-00-010 Approved for
- Elementary Parts & Stacks – Titanium, Aluminium, All Steels, Copper
- Boeing BAC 5008 cat. 5 & 6
- Meets conformance requirements
- Bombardier BAMS 569-001: A, C & D
- Dassault: Approved
- Rolls Royce CSS 129, 131, and Nuclear Full Approval Class A – RRA15721
- SAFRAN Aircraft Engines 455-201-0-00 & PR 6300 Ti, Nickel, Cobalt, low alloy steels, high/very high resistance steels, Stainless, Aluminium and Magnesium
- SAFRAN Landing Systems PCS 4002



## Solutions That Optimize Performance

Quaker Houghton solutions are the aerospace industry standard, proven reliable in the most demanding environments, and earning aerospace approvals.

Our complete range of solutions includes:

- Cleaners
- Corrosion preventives
- Fire-resistant hydraulic fluids
- Forging fluids
- Industrial lubricants
- Metal forming lubricants
- Metal finishing fluids
- Metal removal fluids
- Peelable coatings
- Quenchants

## Partners in Success

**10% INCREASE IN PRODUCTIVITY:** Utilization of advanced high lubricity coolant an aerospace titanium component manufacturer was able to increase cutting speeds and feed rates with a side benefit of \$60,000 savings per machine tool.

**150% INCREASE IN TOOL LIFE:** A switch by a leading service provider for aerospace OEMs to our new coolant with its advanced lubricity package and excellent wetting properties resulted in increased tool life and reduced coolant usage.

**50% REDUCTION IN PART DEFECTS, REDUCED CYCLE TIME AND IMPROVED SURFACE FINISH:** A global manufacture of fuel systems for military and civil aircraft eliminated use of multiple coolants and associated foam, staining and biological issues by switching to a single biostable product. Fluid consumption was decreased and operator acceptance increased.

We offer a range of services to help the world's most forward-looking aerospace companies run even more efficiently and effectively.



QH FLUIDCARE™  
Managed Services



QH Technical  
Services



QH Engineering  
Services



QH Equipment  
Solutions

# Forward Together™

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