



GULF METALWORKING FLUIDS

your local global brand

GULF CASCADE HD-S

Ultimate heavy duty chlorine and secondary amine free water-mix metalworking fluid designed for multiple applications

Product Description:

An ultimate quality, chlorine free, highly biostable water-miscible coolant designed to give outstanding performance when machining a wide variety of materials from aerospace aluminium alloys 2024 and 7075 to high alloy and stainless steels, titanium, copper and cast iron.

GULF CASCADE HD-S produces a low foaming, rich milky micro-emulsion making it suitable for use with modern high pressure coolant systems. As well as being low foaming in soft waters **GULF CASCADE HD-S** demonstrates excellent tolerance of hard waters and its tramp oil rejecting properties provide a very clean working environment.

GULF CASCADE HD-S provides exceptional resistance to fungal infections and bacterial breakdown, making it suitable for use in both centralised systems and single sump machines.

Features & Benefits:

- Excellent lubricity
- Ultimate chlorine free EP performance
- Extra long sump life
- Chlorine, Secondary Amine & NP Ethoxylates free formulation
- Superb surface finish
- Enhanced tool-life
- Low foaming
- Suitable for sensitive alloys

Typical Physical Properties:

Appearance	Amber liquid
Emulsion Type	Milky white
Foaming Tendency	Low
Specific Gravity at 20°C	0.976
pH @ 5%	9.3
Refractometer Factor	1.0
IP 287 Corrosion Break Point, % Volume:	2.0
Reichert Lubricity Characteristics @ 10% dilution: Noise Reduction (Metres): Load Bearing Capacity (Kg/mm2):	10.5 3.10

Recommended Dilutions:

General Machining: 4-6% Heavy Duty Machining: 6-10% Grinding: 3-5%



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Storage:

- Store in a cool, well ventilated area
- Store inside, ideally between 10°C and 30°C
- Store away from direct heat and frost
- Shelf life 24 months from the date of manufacture
- Avoid water collecting on the barrel top

Product Mixing:

Gulf advise the use of automated mixing systems. If mixing manually, always add the concentrate to the water with maximum agitation, if water is added to the concentrate, the emulsions may prove unstable. Avoid mixing with very cold concentrate or water. Check emulsion strength using a calibrated refractometer. Details of where to purchase equipment and how to use it are available from the Gulf Technical Department.

Product Management:

The working concentration should be carefully controlled and monitored on a daily basis as higher and lower working concentrations have health and safety implications. Machines should be cleaned out regularly. Fluid and particulate contaminants should be kept to a minimum. This is important especially in terms of bacterial control and is in line with the latest advice from government and professional sources. Detailed reference sources are quoted in the MSDS.