

FYREWASH[®] F4

Efficient Gas Turbine Compressor Cleaning



This Highly Bio-Degradable Water Based Detergent For Online & Offline Compressor Washing



FYREWASH[®] F4 was developed to give the maximum possible cleaning efficiency and effectiveness from a non-solvent chemical.

Rochems R&D department have developed this product using state of the art technology, resulting in a non-hazardous, user-friendly and biodegradable water-based cleaner.

FYREWASH[®] F4-MC has been developed to meet the most stringent cleaning abilities and chemical & physical requirements to meet the standard for military applications according to MIL-PRF-85704-c.

FYREWASH[®] F4-CC is an environmental friendly product, according to OECD 301-A test and has been developed to meet the requirements of OCNS for use offshore whilst still achieving a high cleaning ability and meeting the biodegradability requirements.

Both FYREWASH[®] F4 versions meet all major OEM's specification requirements world-wide and have a high temperature stability.

Application

FYREWASH[®] F4 can be used with any on-line/off-line injection system but for optimum cleaning results and economic usage of chemicals, Rochem offers a full range of patented manual or fully automatic atomising injection systems to suit any engine type.

On-Line Cleaning

Is normally performed by mixing one part FYREWASH[®] F4 concentrate with four (4) parts of water into a stable solution. Use demineralised water as specified by the engine manufacturer, typically $<11\mu\text{S}/\text{cm}$. The volume of chemical solution needed per wash and the optimum cleaning frequency will depend upon engine size, operating environment and fouling tendency. It is recommended that a post rinse is performed to ensure that the nozzle system is cleaned and ready for next operation.

Off-Line, Crank Washing

Concentrated FYREWASH[®] F4 is normally mixed with four (4) parts of good quality water. The solution is injected at cranking speed, allowed to soak for

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20 to 30 minutes then thoroughly rinsed off at cranking speed with good quality water acceptable to the engine manufacturer. FYREWASH[®] F4 can be used without dilution for offline cleaning, providing a superb cleaning result for heavily fouled compressors.

Antifreeze

Add antifreeze below +10°C, FYREWASH[®] F4 is compatible with Methanol, Propylene Glycol, Ethylene Glycol. Rochem manufacture a superior freeze point depressant, Rochem FPD, please contact local office for further information.

Features and Benefits

- Safely and effectively cleans compressors on-line when running at any speed and load.
- Extremely effective non-solvent cleaner.
- Meets the most stringent requirements of gas turbine manufacturers.
- Ideal for light and frequent on-line washing of any type of industrial, marine or aviation gas turbine to maintain in-service output and fuel efficiency.
- On-line cleaning reduces damaging shutdown/start-up thermal cycles and starter wear and tear.
- Ideal for off-line cleaning due to high biodegradability.
- Non-flammable.
- Mixes readily with most antifreeze agents to allow low ambient temperature on-line/off-line cleaning.
- Supplied in concentrated form to reduce transport and handling costs and minimise storage requirements.
- Worldwide product support.
- Backed by Rochem's unique high value product liability insurance.

Management System

Tariff Code 34029090

EUROPE ISO14001:2004 ISO9001-2008

Shelf Life

5 Years

Health & Safety

EC Hazard rating: Health hazard; Xi. Irritant. US NFPA rating 1-1-0

Protective measures: Non-hazardous but avoid frequent prolonged direct contact with skin to prevent possibility of de-oiling skin and wear eye protection as a matter of course when handling any chemical.

If spilled: Absorb large spillages with sand or earth. Flush away small spillages with water.

Fire: Use foam, carbon dioxide, dry chemicals, sand or earth.

First Aid

Eyes: Flush liberally with water. If any irritation persists seek medical attention.

Skin: Wash skin with soap and water.

Inhalation: Remove patient to fresh air. If rapid recovery does not occur obtain medical attention.

Typical Properties

Appearance-Flash Point: No flash point.

Appearance-Density In g/ml at 20°C:

FYREWASH[®] F4-CC: 1.01 - FYREWASH[®] F4-MC: 1.02

Appearance- pH (20% solution): FYREWASH[®] F4-CC: 7.5 FYREWASH[®] F4-MC: 8.5

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Environmental Considerations

When using and disposing of any chemical, you should refer to your local environmental procedures. Collect the chemical solution and rinse water for correct disposal.

Important Ecological Notes

FYREWASH[®] F4 is a safe and highly biodegradable chemical. However, for off-line, crank-wash cleaning all chemical solution and rinse water drainage should be collected and disposed of properly no matter what type of chemical (Solvent based or detergent based) is being used.

Find out more about our FYREWASH[®] range:



High purity hydrocarbon solvent and surfactant formulation for heavy duty on-line and off-line compressor cleaning.
Best product for oil leaks and heavy fouling



A low foam water based cleaner containing a sustainable plant based grease cutter for on-line and off-line compressor cleaning.
Best low foam water based product on the market



Environmentally friendly water based detergent for on-line and off-line compressor washing.
Superior cleaning qualities that are non-hazardous and environmentally friendly



Environmentally friendly water based detergent for online and offline compressor washing on offshore oil & gas platforms.



Environmentally friendly developed specially for Rolls Royce gas turbine compressors.

We recommend using it with one of our injection system to ensure the highest results



Highly bio-degradable water based detergent with zero cloud point for on-line and off-line compressor cleaning.
Capable of removing the widest spectrum of fouling



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