



A PURE, BIODEGRADABLE WATER-BASED DETERGENT FOR ON-LINE & OFF-LINE CLEANING OF COMPRESSORS

PRODUCT DESCRIPTION

FYREWASH® F3 was developed to give the maximum possible cleaning efficiency and effectiveness from a non-solvent chemical.

When developing and testing FYREWASH® F3, Rochem's chemists evaluated all other leading non-solvent water-based chemicals to make sure that F3 would have superior cleaning qualities. This resulted in a non-hazardous, user-friendly and highly biodegradable water-based cleaner which now sets the standard against which the performance and cost effectiveness of all other true non-solvent water-based gas turbine compressor cleaners can be judged.

Caution - some products are misleadingly sold as non-solvent, water based detergents when they actually contain as much as 10% of solvent in order to boost their cleaning capabilities. So if you want a true non-solvent chemical always carefully check the Material Safety Data Sheet of the supplier before purchasing. And if you do want a solvent based cleaner, please ask for details of Rochem's FYREWASH® SB, F1 and F2 range of solvent-based cleaners

APPLICATION

ON-LINE CLEANING

Is normally performed by mixing one part FYREWASH® F3 concentrate with four (4) parts of water into a stable solution. For very light fouling conditions based mainly on water-soluble contamination higher dilutions can be used. Use distilled or good quality demineralised water as required by the engine manufacturer. The volume of chemical solution needed per wash and the optimum cleaning frequency will depend upon engine size, operating environment, fouling tendency etc. When using a Rochem injection system please consult your manual.

FYREWASH® F3 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. The low cost Rochem Efficiency Plus (E+) on-line, real-time efficiency and performance monitoring system is also available for use with any type of gas turbine.

OFF-LINE, CRANK WASHING

Concentrated FYREWASH® F3 is normally mixed with four (4) parts of good quality water. The solution is injected at cranking speed, allowed to soak for 20 to 60 minutes then thoroughly rinsed off at cranking speed with good quality water acceptable to the engine manufacturer. When using a non-Rochem supplied wash system follow the engine manufacturers instructions for off-line washing.

When using a Rochem-supplied injection system, please refer to your Rochem manual. Please also note that if using a Rochem injection system there is an option for an economy, short cycle off-line wash based on the initial injection of undiluted concentrate chemical instead of large volumes of water/chemical solution. This can reduce downtime and still give excellent cleaning results. Please contact your nearest Rochem office for full information on this or any other on-line or off-line compressor washing procedure.

NEVER USE UNPROVEN CHEMICALS OR INJECTION SYSTEMS FOR COMPRESSOR CLEANING - ESPECIALLY FOR ON-LINE CLEANING!

FEATURES BENEFITS

- ▶ Safely and effectively cleans compressors on-line when running at any speed and load.
- ▶ The most 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 avoids damaging shutdown/start-up thermal cycles and starter wear and tear which result from off-line crank washing.
- ▶ Also ideal for off-line cleaning due to high biodegradability.
- ▶ Non-flammable. Mixes readily with most antifreeze agents to allow sub-zero on-line/off-line cleaning.
- ▶ Supplied in concentrated form to reduce transport and handling costs and minimise storage requirements.
- ▶ Worldwide product support.
- ▶ Backed by Rochems unique high value product liability insurance.

APPLICATIONS

For on-line, fired wash cleaning of gas turbine and process compressors.

Also for crank-wash, off-line cleaning of gas turbine and process compressors.

SAFETY AND HANDLING

HAZARDS	EC Hazard rating: Xi, Irritant US NFPA rating: 1, 0, 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.
SPILLAGE	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	Flush liberally with water. If any irritation persists seek medical attention.
EYES	
SKIN	Wash skin with soap and water.
INHALATION	Remove patient to fresh air. If rapid recovery does not occur obtain medical attention.
IF SWALLOWED	Do NOT induce vomiting. Give nothing by mouth. Obtain medical attention.
HANDLING	Store in a cool, dry place and maintain adequate ventilation.
TRANSPORT	No restrictions on any type of transport, product is not classified.
PACKAGING	Non- returnable polyethylene containers. Approx 25 and 210 litres or available via bulk 'tote' bin delivery in some regions.

TYPICAL PROPERTIES

APPEARANCE	Clear liquid
DENSITY	In g/ml at 15°C: 0.99
FLASH POINT	No flash point
pH (20% solution)	7 – 7.5
COMPATIBILITY	
Metal:	No known effect
Rubber:	No known effect
SOLUBILITY	Mixable in all proportions

IMPORTANT ECOLOGICAL NOTES

FYREWASH® F3 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.

DO NOT make the potentially very costly mistake of thinking that the chemical and rinse water drainage from water-based detergents can simply be dumped to storm drains or direct to earth. Any chemical cleaning solution and rinse water may become polluted with potentially harmful deposits from the compressor and hot section so **all** drain off must be collected and disposed of properly.

Rochem or any associated or subsidiary company's warranties of fitness and merchantability, if any, as well as any express warranties regarding the use of this product shall not be effective or actionable unless the goods are used as directed herein and in no other manner due to potential hazards from improper use of the goods described herein. Product might vary slightly depending on country of origin.



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