

ZOK 27® On-line and off-line compressor cleaning fluid for gas turbines in aircraft, industrial, offshore and power generation applications

P R O D U C T D A T A

Washing of gas turbine compressors is known to provide the most effective method for preventing compressor fouling. It ensures maximum available power output, improved fuel efficiency and reduced wear and tear on machine components such as bearings and blades. On-line washing (hot washing) can significantly extend the period between necessary shutdowns for off-line washing, thus reducing costly downtime and production losses.

ZOK 27® is a concentrated water-based, non-flammable, environmentally friendly, biodegradable fluid.

ZOK 27® is internationally approved and is in use world-wide on all types of engines from 500SHP helicopter engines to 200MW power generators.

ZOK 27® contains dramatically reduced levels of alkali metals and complies fully with all specifications, including:

Alstom Gas Turbines
General Electric GEK 103623 and
MID-TD-0000-5
Rolls-Royce MSRR 9914
Solar ES9-62-1 On-Crank and Off-Line
US MIL-PRF-85704C Type II Off-Line
UK Defence Standard 79-18

ZOK 27® has the lowest possible corrosion rates; in tests on most metals, zero corrosion is reported.

ZOK 27®'s unique corrosion inhibitor allows engines to be left ready for instant restart, even in salty offshore conditions.

ZOK 27® formulation, manufacturing and packaging is subject to the Quality Assurance requirements of ISO 9001.

ZOK 27® is harmless to turbines and will not cause blade or coating erosion, thermal shock or bearing damage.

ZOK 27® has a low ash level. It is essential during hot wash that the cleaner should leave as little ash residue as possible to avoid blocking turbine cooling blade holes.

ZOK 27® is more effective than standard aqueous cleaners, so it cleans faster. Its non-ionic cleansing action removes organic contaminants such as oil, grease, and hydrocarbons, as well as inorganic fouling such as salts and soils. An efficient clean is achieved during the very short contact times of a hot wash.

Description

A concentrated neutral water-based detergent cleaning fluid for cleaning and corrosion inhibition of gas turbine engines compressors.

Dilution

Dilute 1+4 with water before use. (20% solution).
Demineralised water (<11µS/cm conductivity) may be used for hot/online cleaning.
Drinking water (<700µS/cm conductivity) may be used for cold/off-line cleaning.
A ready-to-use (RTU) version of this product is available for users who do not have supplies of demineralised water.

Composition

Blend of non-ionic surfactants, corrosion inhibitors, organic solvents and demineralised water.

Appearance


Clear pale straw coloured liquid with a mild pleasant odour.

Solubility

Completely soluble in water. No agitation required.

Compatibility

Not corrosive or detrimental to any of the materials normally used in gas turbine engines or aircraft components. No adverse effect on synthetic turbine oils.



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Safety

Wash off small splashes. Wear rubber gloves if sustained contact is likely. Wear goggles if spraying. This preparation is not classified as toxic, hazardous or irritant. See Safety Data Sheet.

Spillage

Biodegradable. Small spillage - flush away with water. Large spillage - absorb with sand or earth and collect for disposal. Observe national and local regulations.

Shelf Life

5 Years

Typical values

pH	7.2 - 7.5
Specific gravity	1.01
Total alkali metal	(<0.5ppm after dilution)
Ash	<0.01%
Aromatic compounds	None
Alkyl phenol ethoxylates	None
2-Butoxyethanol	None
Halogens	None

Application

By spray ring or lance in either motor-over (off-line) or fired (on-line) wash as directed by the engine manufacturer in the quantities recommended by them.

Water rinse

Not necessary unless recommended by engine manufacturer.

Dryout run

Not necessary unless recommended by the engine manufacturer.

Antifreeze

Add antifreeze below +5°C (see Technical Bulletin 106c). Compatible with Methanol, Isopropyl Alcohol, Ethylene Glycol, Propylene Glycol.

Shipping

No restrictions. Suitable for transport on passenger aircraft. IATA/ICAO classified as non-hazardous for international transport by sea/air.

Storage

Non flammable. Store in a cool shaded location. If inadvertently frozen, product can be used after thawing out.

Packaging

25 litre high density polyethylene can (USA 6.6 Gallons) Gross weight 26kgs
210 litre high density polyethylene drum (USA 55 Gallons) Gross weight 220kgs
1,000 litre International Bulk Container (IBC) (USA 264 Gallons) Gross weight 1115kgs
Packaging stacks 3 meters high and is UNII export grade

Tariff Code

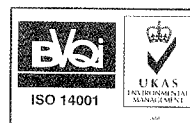
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Quality Management System

ISO 9001

Environmental Management System

ISO 14001



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**APPROVED BY THE FOLLOWING
& Meets Their Gas Turbine Washing Specifications:**

ABB / ALSTOM

mitsubishi

ALLIED SIGNAL

MITSUI

ALLISON

PRATT & WHITNEY

BOEING

PRATT & WHITNEY CANADA

BRITISH AIRWAYS

ROLLS - ROYCE

CFM INTERNATIONAL

SIEMENS

EUROPEAN GAS TURBINES

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TEXTRON LYCOMING

GENERAL ELECTRIC

TURBOMECA

IAE

WESTINGHOUSE

KAWASAKI

UK MINISTRY OF DEFENSE

KONGSBERG

**US MIL SPEC -PRF-85704C
TYPE II & TYPE IIA**

MAN

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