

# ZOK

Cleaning power for Gas Turbines

**ZOK mx**® Powerful on-line and off-line compressor cleaning fluid for gas turbines in aviation, industrial, offshore and power generation applications

## PRODUCT DATA

The regular washing of gas turbines compressors is known to provide the most effective method of preventing long term compressor fouling. It ensures maximum available power output, improved fuel efficiency and reduced wear and tear on components, such as bearings and blades.

Online washing (hot washing) can significantly extend the period between necessary shutdowns for off-line washing, thus reducing costly downtime and lost production.

### Product Characteristics

#### Description

A concentrated water-based, non-flammable environmentally friendly biodegradable fluid. Specifically developed for heavy-duty cleaning of gas turbine engine compressors.

#### Composition

A special blend of non-ionic surfactants, organic solvents and demineralised water.

#### Appearance

Pale straw colour liquid with a mild pleasant odour.

### Approvals

The product has been formulated to meet many of the OEM specifications, including:

Alstom Gas Turbines  
General Electric MID-TD-0000-5  
Rolls-Royce MSRR9914  
Solar ES9-62-1 On-Crank and on-line  
USMIL-PRF-85704C Type II Off-Line  
And Type III On-Line.

### Technical Information

#### Shelf Life

5 Years

#### Typical values

pH	8.0 - 8.5
Specific gravity	1.0
Total alkali metal	<10 ppm (<2 ppm after dilution)
Ash	<0.01%
Aromatic compounds	None
Alkyl Phenol Ethoxylates	None
Hydrocarbon solvents	None
2-Butoxyethanol	None
Halogens	None

### Contact Information

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## Product Usage

### Dilution

Dilute 1+4 with water before use (20% solution). Demineralised water (<11µS/cm conductivity) should be used for hot/on-line 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 the supplies of demineralised water.

### Application

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

It is essential during hot wash that the cleaner should leave as little ash residue as possible to avoid blocking turbine cooling blade holes.

### Water rinse

Recommended

### Dryout run

Recommended

### Antifreeze

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

## Health & Safety

### Safety

Wash off all 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 Sheets.

### Spillage

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

## Packaging

### Packaging

25 litre high density polyethylene can (USA 6.6 Gallons) Gross weight 26kgs  
210 litre tight head steel drum (USA 55 Gallons) Gross weight 230kgs  
1,000 litre International Bulk Container (IBC) (USA 264 Gallons) Gross weight 1070kgs  
Packaging stacks 3 meters high and is UNII export grade.



### Shipping

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

### Storage

Non flammable. Store at room temperature between +4°C and +80°C. If inadvertently frozen, product can be used after thawing out.

## Management System

### Tariff Code

34029090 Europe  
3402 20 50 100 3 USA

### Quality Management System

ISO 9001

### Environmental Management System

ISO 14001

### Joint Qualification System

Achilles

