



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

## P R O D U C T   D A T A

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

#### Composition

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

#### Appearance

Clear pale straw coloured liquid with a mild pleasant odour.

### Technical Information

#### Shelf Life

5 Years

#### Typical values

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

### Approvals

The product is internationally approved and is in use world-wide on all types of engines from small helicopter engines to the largest power generators. Manufacturers approvals include;  
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

### Contact Information

#### ZOK International Group Ltd.

Elsted, Midhurst  
West Sussex, GU29 0JT  
England

Phone: +44 (0)1730 811920

Fax: +44 (0)1730 811930

Email: [zok@zok.com](mailto:zok@zok.com)

Internet: [www.zok.com](http://www.zok.com)

#### Zokman Products Inc.

1220 East Gump Road  
Fort Wayne  
IN 46845, USA

Phone: 0800 727 6027

+1 260 637 4038

Fax: 0800 844 3227

+1 260 637 5031

Email: [zzokman@aol.com](mailto:zzokman@aol.com)

Internet: [www.zok.com](http://www.zok.com)



# ZOK

Cleaning power for Gas Turbines

## Product Usage

### Dilution

Dilute 1+4 with water before use (20% solution). Demineralised water (<11µS/cm conductivity) should 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 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. The unique corrosion inhibitor allows engines to be left ready for instant restart, even in salty offshore conditions.

### Water rinse

Not necessary unless recommended by engine manufacturer.

### Dryout run

Not necessary unless recommended by the engine manufacturer.

### Antifreezeze

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

# ZOK<sup>®</sup>

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