SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product name ZOK 27

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses Cleaning compound, turbine engine gas path. Corrosion inhibitor.

1.3. Details of the supplier of the safety data sheet
Supplier ZOK International Group
Airworthy House
Elsted Marsh
Midhurst
West Sussex
GU29 0JT
+44 333 700 2727
zok@zok.com

Manufacturer ZOK International Group
Airworthy House
Elsted Marsh
Midhurst
West Sussex
GU29 0JT
+44 (0) 333 700 2727
zok@zok.com

1.4. Emergency telephone number
Emergency telephone OHES Environmental; 24 Hours. +44 (0) 333 333 9964

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Physical hazards Not Classified
Health hazards Eye Irrit. 2 - H319
Environmental hazards Not Classified

2.2. Label elements
Pictogram

Signal word Warning
ZOK 27

Hazard statements
EUH208 Contains Ethanol,2,2'-[[(methyl-1H-benzotriazol-1-yl)methyl]imino]bis-(9Cl). May produce an allergic reaction.
H319 Causes serious eye irritation.

Precautionary statements
P264 Wash contaminated skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/ attention.

Detergent labelling
5 - < 15% non-ionic surfactants, < 5% anionic surfactants

2.3. Other hazards
This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Percentage</th>
<th>CAS number</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isotridecyl alcohol, ethoxylated</td>
<td>10-30%</td>
<td>69011-36-5</td>
<td>Acute Tox. 4 - H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2 - H319</td>
</tr>
<tr>
<td>3-butoxypropan-2-ol</td>
<td>1-5%</td>
<td>5131-66-8</td>
<td>Eye Irrit. 2 - H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC number: 225-878-4</td>
<td>REACH registration number: 01-2119475527-28-XXXX</td>
</tr>
<tr>
<td>Oleoyl Sarcosinic Acid</td>
<td>1-5%</td>
<td>110-25-8</td>
<td>Eye Dam. 1 - H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC number: 203-749-3</td>
<td>REACH registration number: 01-2119488991-20-XXXX</td>
</tr>
</tbody>
</table>

M factor (Acute) = 1

Classification
Acute Tox. 4 - H302
Sk In Irrit. 2 - H315
Eye Dam. 1 - H318
Aquatic Acute 1 - H400
**ZOK 27**

**Ethanol,2,2’-[[methyl-1H-benzotriazol-1-yl)methyl]imino]bis-**  
(9CI)  
<1%

| CAS number: 80584-88-9 | EC number: 279-501-3 | REACH registration number: 01-2119982397-21-XXXX |

**Classification**  
Acute Tox. 4 - H302  
Eye Dam. 1 - H318  
Skin Sens. 1B - H317

The full text for all hazard statements is displayed in Section 16.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**Inhalation**  
Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

**Ingestion**  
Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.

**Skin contact**  
Remove affected person from source of contamination. Take off immediately all contaminated clothing and wash it before reuse. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.

**Eye contact**  
Remove affected person from source of contamination. Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

**4.2. Most important symptoms and effects, both acute and delayed**

**Inhalation**  
Vapours may irritate throat/respiratory system. Symptoms following overexposure to vapour may include the following: Coughing, chest tightness, feeling of chest pressure.

**Ingestion**  
May cause stomach pain or vomiting.

**Skin contact**  
Prolonged contact may cause redness, irritation and dry skin.

**Eye contact**  
Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.

**4.3. Indication of any immediate medical attention and special treatment needed**

**Specific treatments**  
Treat symptomatically.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**  
The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

**5.2. Special hazards arising from the substance or mixture**

**Specific hazards**  
None known.

**Hazardous combustion products**  
Carbon monoxide (CO). Carbon dioxide (CO2).

**5.3. Advice for firefighters**
**Protective actions during firefighting**

No specific firefighting precautions known.

**Special protective equipment for firefighters**

Use air-supplied respirator, gloves and protective goggles.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions**

Wear protective clothing as described in Section 8 of this safety data sheet.

**Environmental precautions**

Avoid discharge to the aquatic environment. Collect and dispose of spillage as indicated in Section 13.

#### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up**

Stop leak if safe to do so. Small Spillages: Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Collect and dispose of spillage as indicated in Section 13. Large Spillages: Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Collect and dispose of spillage as indicated in Section 13.

#### 6.4. Reference to other sections

**Reference to other sections**

For personal protection, see Section 8. For waste disposal, see Section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Usage precautions**

Avoid spilling. Avoid contact with skin and eyes.

#### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions**

Store at temperatures between 4°C and 50°C. Store in tightly-closed, original container. Store in a dry place.

**Storage class**

Chemical storage.

#### 7.3. Specific end use(s)

**Specific end use(s)**

The identified uses for this product are detailed in Section 1.2.

### SECTION 8: Exposure controls/Personal protection

#### 8.1. Control parameters

**Occupational exposure limits**

**Dipropyleneglycol Methyl Ether**

Long-term exposure limit (8-hour TWA): WEL 50 ppm 308 mg/m³ vapour

WEL = Workplace Exposure Limit

**Triethanolamine (CAS: 102-71-6)**

**Ingredient comments**

No exposure limits known for ingredient(s).

#### 8.2. Exposure controls
ZOK 27

**Protective equipment**

**Appropriate engineering controls**

Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients. Avoid inhalation of vapours and spray/mists.

**Eye/face protection**

Wear chemical splash goggles.

**Hand protection**

Wear protective gloves made of the following material: Nitrile rubber.

**Other skin and body protection**

Wear appropriate clothing to prevent any possibility of skin contact.

**Hygiene measures**

Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate hand lotion to prevent defatting and cracking of skin. When using do not eat, drink or smoke.

**Respiratory protection**

Respiratory protection may be required if excessive airborne contamination occurs. Use approved respirator if air contamination is above an acceptable level. Wear a respirator fitted with the following cartridge: Organic vapour filter.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Liquid.</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>Colourless to pale yellow.</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>Characteristic.</td>
</tr>
<tr>
<td><strong>Odour threshold</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>pH (concentrated solution): 7.2-7.5</td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>0°C</td>
</tr>
<tr>
<td><strong>Initial boiling point and range</strong></td>
<td>100°C @ 760 mm Hg</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>&gt; 100°C Pensky-Martens closed cup.</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not relevant.</td>
</tr>
<tr>
<td><strong>Upper/lower flammability or explosive limits</strong></td>
<td>Lower flammable/explosive limit: Not applicable. Upper flammable/explosive limit: Not applicable.</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>Not relevant.</td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td>Not relevant.</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>1.01 @ 20°C</td>
</tr>
<tr>
<td><strong>Solubility(ies)</strong></td>
<td>Miscible with water.</td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
<td>log Pow: &lt; 3</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Not relevant.</td>
</tr>
<tr>
<td><strong>Decomposition Temperature</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>10.44 cSt @ 20°C</td>
</tr>
</tbody>
</table>
ZOK 27

Explosive properties
Not considered to be explosive.

Oxidising properties
The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

9.2. Other information
Volatile organic compound
This product contains a maximum VOC content of 50 g/L. Average VOC content: 41.2 g/L

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity
There are no known reactivity hazards associated with this product.

10.2. Chemical stability
Stability
Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions
No potentially hazardous reactions known.

10.4. Conditions to avoid
Conditions to avoid
Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials
Materials to avoid
Strong oxidising agents. Strong reducing agents.

10.6. Hazardous decomposition products
Hazardous decomposition products
Heating may generate the following products: Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity - oral
ATE oral (mg/kg) 4,508.57

Acute toxicity - inhalation
ATE inhalation (dusts/mists mg/l) 84.05

Serious eye damage/irritation
Serious eye damage/irritation Causes serious eye irritation.

Skin sensitisation
Skin sensitisation May cause sensitisation by skin contact.

Germ cell mutagenicity
Genotoxicity - in vitro
Does not contain any substances known to be mutagenic.

Genotoxicity - in vivo
Does not contain any substances known to be mutagenic.

Carcinogenicity
Carcinogenicity
Does not contain any substances known to be carcinogenic.

Reproductive toxicity
Reproductive toxicity - fertility
Does not contain any substances known to be toxic to reproduction.
Reproductive toxicity - development
Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure
Target organs No specific target organs known.

Specific target organ toxicity - repeated exposure
Target organs No specific target organs known.

Toxicological information on ingredients.

---

**Isotridecyl alcohol, ethoxylated**

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - oral</td>
<td>500.0</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Irritation of eyes is assumed.</td>
</tr>
</tbody>
</table>

---

**3-butoxypropan-2-ol**

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity oral (LD₅₀ mg/kg)</td>
<td>2,100.0</td>
<td>Rat</td>
</tr>
</tbody>
</table>

---

**Oleoyl Sarcosinic Acid**

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity oral (LD₅₀ mg/kg)</td>
<td>9,200.0</td>
<td>Rat</td>
</tr>
</tbody>
</table>

---

**SECTION 12: Ecological information**

Ecotoxicity Not regarded as dangerous for the environment.

12.1. Toxicity
**ZOK 27**

### Acute aquatic toxicity

**Acute toxicity - fish**
- LC₅₀, 96 hours: 33 mg/l, Marinewater fish
- EC₅₀, 96 hours: >0.02 %, Pimephales promelas (Fat-head Minnow)

**Acute toxicity - aquatic invertebrates**
- EC₅₀, 48 hours: >0.01 %, Daphnia magna

**Acute toxicity - aquatic plants**
- EC₅₀, 72 hours: 8.1 mg/l, Marinewater algae

**Acute toxicity - microorganisms**
- LC₅₀, 10 days: 1267 mg/kg, Activated sludge

### 12.2. Persistence and degradability

**Persistence and degradability**
The surfactant(s) contained in this product complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. The product is biodegradable but it must not be discharged into drains without permission from the authorities.

- **Biodegradation**: Inherently biodegradable.
- **Biological oxygen demand**: < 0.1 g O₂/g substance
- **Chemical oxygen demand**: < 8.5 g O₂/g substance

### 12.3. Bioaccumulative potential

**Bioaccumulative potential**
The product does not contain any substances expected to be bioaccumulating.

- **Partition coefficient**: log Pow: < 3

### 12.4. Mobility in soil

**Mobility**
The product is miscible with water and may spread in water systems.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment**
This product does not contain any substances classified as PBT or vPvB.

### 12.6. Other adverse effects

**Other adverse effects**
None known.

### SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**General information**
Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**Disposal methods**
Collect and place in suitable waste disposal containers and seal securely. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

### SECTION 14: Transport information

**General**
The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

**14.1. UN number**
Not applicable.

**14.2. UN proper shipping name**
Not applicable.
14.3. Transport hazard class(es)
No transport warning sign required.

14.4. Packing group
Not applicable.

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations
The surfactant(s) contained in this product complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

EU legislation

Guidance
Workplace Exposure Limits EH40.

Authorisations (Title VII Regulation 1907/2006)
No specific authorisations are known for this product.

Restrictions (Title VIII Regulation 1907/2006)
No specific restrictions on use are known for this product.

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS
All the ingredients are listed or exempt.

Canada - DSL/NDSL
All the ingredients are listed or exempt.

US - TSCA
All the ingredients are listed or exempt.

Australia - AICS
All the ingredients are listed or exempt.
ZOK 27

Japan - ENCS
All the ingredients are listed or exempt.

Korea - KECI
All the ingredients are listed or exempt.

China - IECSC
All the ingredients are listed or exempt.

Philippines – PICCS
All the ingredients are listed or exempt.

New Zealand - NZIOC
All the ingredients are listed or exempt.

SECTION 16: Other information

General information
Only trained personnel should use this material.

Classification procedures
Eye Irrit. 2 - H319: Calculation method.

Issued by
Craig Appleby - Chemist

Revision date
01/02/2019

Revision
1023

Supersedes date
22/03/2018

SDS number
4524

SDS status
Approved.

Hazard statements in full
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains Ethanol,2,2'-[[methyl-1H-benzotriazol-1-yl)methyl]imino]bis-(9Cl). May produce an allergic reaction.

Signature
Craig Appleby

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company’s knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.