



## SAFETY DATA SHEET ZOK 27

### 1. Identification

#### Product identifier

**Product name** ZOK 27

#### Recommended use of the chemical and restrictions on use

**Application** Detergent. Corrosion inhibitor.

#### Details of the supplier of the safety data sheet

**Supplier** Zokman Products Inc.  
1220 E. Gump Road  
Fort Wayne  
IN 46845  
USA  
zzokman@aol.com  
+1 800 727 6027  
+1 800 844 3227  
+1 260 637 4038  
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**Manufacturer** ZOK International Group  
Airworthy House  
Elsted Marsh  
Midhurst  
West Sussex  
GU29 0JT  
+44 (0) 333 700 2727  
+44 (0) 333 700 2728  
zok@zok.com

#### Emergency telephone number

**Emergency telephone** CHEMTREC; 24 Hours. (800) 424-9300

**National emergency telephone number** CHEMTREC; 24 Hours. (800) 424-9300

### 2. Hazard(s) identification

#### Classification of the substance or mixture

**Physical hazards** Not Classified

**Health hazards** Eye Irrit. 2A - H319

**Environmental hazards** Not Classified

#### Label elements

**ZOK 27****Pictogram****Signal word**

Warning

**Hazard statements**

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.

**Contains**

Isotridecylalcohol, ethoxylated

**Other hazards**

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

**3. Composition/information on ingredients****Mixtures**

<b>Isotridecylalcohol, ethoxylated</b>	<b>10-30%</b>
CAS number: 9043-30-5	
<b>Classification</b>	
Eye Dam. 1 - H318	
<b>3-butoxypropan-2-ol</b>	<b>1-5%</b>
CAS number: 5131-66-8	
REACH registration number: 01-2119475527-28-XXXX	
<b>Classification</b>	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
<b>Oleoyl Sarcosinic Acid</b>	<b>1-5%</b>
CAS number: 110-25-8	
REACH registration number: 01-2119488991-20-XXXX	
M factor (Acute) = 1	
<b>Classification</b>	
Acute Tox. 4 - H332	
Skin Irrit. 2 - H315	
Eye Dam. 1 - H318	
Aquatic Acute 1 - H400	

The Full Text for all Hazard Statements are Displayed in Section 16.

**4. First-aid measures****Description of first aid measures**

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<b>Inhalation</b>	Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
<b>Skin Contact</b>	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.
<b>Eye contact</b>	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.

### Most important symptoms and effects, both acute and delayed

<b>Inhalation</b>	Vapors may irritate throat/respiratory system. Symptoms following overexposure to vapor may include the following: Coughing, chest tightness, feeling of chest pressure.
<b>Ingestion</b>	May cause stomach pain or vomiting.
<b>Skin contact</b>	Prolonged contact may cause redness, irritation and dry skin.
<b>Eye contact</b>	Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.

### Indication of immediate medical attention and special treatment needed

<b>Specific treatments</b>	Treat symptomatically.
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## 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	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.
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### Special hazards arising from the substance or mixture

<b>Specific hazards</b>	None known.
<b>Hazardous combustion products</b>	Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).

### Advice for firefighters

<b>Protective actions during firefighting</b>	No specific firefighting precautions known.
<b>Special protective equipment for firefighters</b>	Use air-supplied respirator, gloves and protective goggles.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet.
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### Environmental precautions

<b>Environmental precautions</b>	Avoid discharge to the aquatic environment. Collect and dispose of spillage as indicated in Section 13.
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### Methods and material for containment and cleaning up

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**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.

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see Section 13.

### 7. Handling and storage

#### Precautions for safe handling

**Usage precautions** Avoid spilling. Avoid contact with skin and eyes.

#### 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.

#### Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

### 8. Exposure Controls/personal protection

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

**Ingredient comments** No exposure limits known for ingredient(s).

#### Exposure controls

##### Protective equipment



**Appropriate engineering controls** Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients. Avoid inhalation of vapors 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** No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.

### 9. Physical and Chemical Properties

#### Information on basic physical and chemical properties

**Appearance** Liquid.

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<b>Color</b>	Colorless to pale yellow.
<b>Odor</b>	Characteristic.
<b>Odor threshold</b>	Not applicable.
<b>pH</b>	pH (concentrated solution): 7.2-7.5
<b>Melting point</b>	0°C
<b>Initial boiling point and range</b>	100°C @ 760 mm Hg
<b>Flash point</b>	> 100°C PMCC (Pensky-Martens closed cup).
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not relevant.
<b>Upper/lower flammability or explosive limits</b>	Lower flammable/explosive limit: Not applicable. Upper flammable/explosive limit: Not applicable.
<b>Vapour pressure</b>	Not relevant.
<b>Vapour density</b>	Not relevant.
<b>Relative density</b>	1.01 @ 20°C
<b>Solubility(ies)</b>	Miscible with water.
<b>Partition coefficient</b>	log Pow: < 3
<b>Auto-ignition temperature</b>	Not relevant.
<b>Decomposition Temperature</b>	Not applicable.
<b>Viscosity</b>	22.26 cSt @ 20°C
<b>Explosive properties</b>	Not considered to be explosive.
<b>Oxidising properties</b>	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidizing.
<b>Volatile organic compound</b>	This product contains a maximum VOC content of <50 g/l.

**10. Stability and reactivity**

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
<b>Possibility of hazardous reactions</b>	No potentially hazardous reactions known.
<b>Conditions to avoid</b>	Avoid excessive heat for prolonged periods of time.
<b>Materials to avoid</b>	Strong oxidizing agents. Strong reducing agents.
<b>Hazardous decomposition products</b>	Heating may generate the following products: Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).

**11. Toxicological information****Information on toxicological effects****Acute toxicity - inhalation**

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**ATE inhalation (dusts/mists mg/l)** 84.04907975

**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.****Isotridecylalcohol, ethoxylated****Serious eye damage/irritation**

**Serious eye damage/irritation** Irritation of eyes is assumed.

**Respiratory sensitisation**

**Respiratory sensitisation** Not known.

**Skin sensitisation**

**Skin sensitisation** Not known.

**3-butoxypropan-2-ol****Acute toxicity - oral**

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 2,100.0

**Species** Rat

**ATE oral (mg/kg)** 2,100.0

**Oleoyl Sarcosinic Acid****Acute toxicity - oral**

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 9,200.0

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<b>Species</b>	Rat
<b>ATE oral (mg/kg)</b>	9,200.0
<b><u>Acute toxicity - inhalation</u></b>	
<b>Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)</b>	1.37
<b>Species</b>	Rat
<b>ATE inhalation (dusts/mists mg/l)</b>	1.37

### 12. Ecological Information

**Ecotoxicity** Not regarded as dangerous for the environment.

#### Toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 33 mg/l, Marinewater fish

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 8.1 mg/l, Marinewater algae

**Acute toxicity - microorganisms** LC<sub>50</sub>, 10 days: 1267 mg/kg, Activated sludge

#### Persistence and degradability

**Persistence and degradability** The product is readily biodegradable.

**Biodegradation** Water - Degradation 57.4%: 28 days

**Biological oxygen demand** < 0.1 g O<sub>2</sub>/g substance

**Chemical oxygen demand** < 8.5 g O<sub>2</sub>/g substance

#### Bioaccumulative potential

**Bio-Accumulative Potential** The product does not contain any substances expected to be bioaccumulating.

**Partition coefficient** log Pow: < 3

#### Mobility in soil

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

#### Results of PBT and vPvB assessment

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

#### Other adverse effects

**Other adverse effects** None known.

### 13. Disposal considerations

#### 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.

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### 14. Transport information

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

**UN Number**

Not applicable.

**UN proper shipping name**

Not applicable.

**Transport hazard class(es)**

No transport warning sign required.

**Packing group**

Not applicable.

**Environmental hazards**

**Environmentally Hazardous Substance**

No.

**Special precautions for user**

Not applicable.

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

### 15. Regulatory information

**US Federal Regulations**

**SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

Not listed.

**SARA 313 Emission Reporting**

Not listed.

**CAA Accidental Release Prevention**

Not listed.

**US State Regulations**

**California Proposition 65 Carcinogens and Reproductive Toxins**

Not listed.

**California Air Toxics "Hot Spots" (A-I)**

Not listed.

**California Air Toxics "Hot Spots" (A-II)**

Not listed.

**Rhode Island "Right To Know" List**

Not listed.

**New Jersey "Right To Know" List**

Not listed.



## ZOK 27

### 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.

#### **Japan - MITI**

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.

### 16. Other information

<b>General information</b>	Only trained personnel should use this material.
<b>Issued by</b>	Mike Hale Chemist
<b>Revision date</b>	6/12/2015
<b>Revision</b>	1020
<b>Supersedes date</b>	9/23/2013
<b>SDS No.</b>	4524
<b>SDS status</b>	Approved.
<b>Signature</b>	Mike Hale
<b>Hazard statements in full</b>	H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H400 Very toxic to aquatic life.
<b>NFPA - flammability hazard</b>	Will not burn. (0)
<b>NFPA - health hazard</b>	Irritation, minor residual injury. (1)
<b>NFPA - instability hazard</b>	Normally stable. (0)
<b>ACA HMIS Health rating.</b>	Slight hazard. (1)
<b>ACA HMIS Physical hazard rating.</b>	Normally stable. (0)

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<b>ACA HMIS Personal protection rating.</b>	A
<b>ACA HMIS Flammability rating.</b>	Will not burn. (0)

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.