

SAFETY DATA SHEET

ZOK 27

1. Identification

Product identifier

Product name ZOK 27

Recommended use of the chemical and restrictions on use

Application Cleaning compound, turbine engine gas path. Corrosion inhibitor.

Details of the supplier of the safety data sheet

Supplier Zokman Products Inc.
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Manufacturer ZOK International Group
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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

Label elements

Pictogram



Signal word Warning

Hazard statements H319 Causes serious eye irritation.

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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.

Other hazards

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

3. Composition/information on ingredients

Mixtures

Isotridecylalcohol, ethoxylated	10-30%
CAS number: 9043-30-5	
Classification Eye Dam. 1 - H318	
3-butoxypropan-2-ol	1-5%
CAS number: 5131-66-8	
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	
Oleoyl Sarcosinic Acid	1-5%
CAS number: 110-25-8	
Classification Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Not relevant.	
Ethanol,2,2'-[[[(methyl-1H-benzotriazol-1-yl)methyl]imino]bis-(9CI)]	<1%
CAS number: 80584-88-9	
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.

4. First-aid measures

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.

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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.

Most important symptoms and effects, both acute and delayed

Inhalation	Vapors may irritate throat/respiratory system. Symptoms following overexposure to vapor 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.

Indication of immediate medical attention and special treatment needed

Specific treatments	Treat symptomatically.
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5. Fire-fighting measures

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.
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Special hazards arising from the substance or mixture

Specific hazards	None known.
Hazardous combustion products	Carbon monoxide (CO). Carbon dioxide (CO ₂).

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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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

Environmental precautions	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.

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 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 vapor filter.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

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

10. Stability and reactivity

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

11. Toxicological information**Information on toxicological effects**

ZOK 27**Acute toxicity - inhalation**

ATE inhalation (dusts/mists mg/l) 84.05

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Skin sensitization

Skin sensitization 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 sensitization

Respiratory sensitization Not known.

Skin sensitization

Skin sensitization Not known.

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

Acute toxicity oral (LD₅₀ mg/kg) 2,100.0

Species Rat

ATE oral (mg/kg) 2,100.0

Oleoyl Sarcosinic Acid**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 9,200.0

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Species	Rat
ATE oral (mg/kg)	9,200.0
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ dust/mist mg/l)	1.37
Species	Rat
ATE inhalation (dusts/mists mg/l)	1.37

12. Ecological Information

Ecotoxicity	Not regarded as dangerous for the environment.
Acute toxicity - fish	LC ₅₀ , 96 hours: 33 mg/l, Marinewater fish EC ₅₀ , 96 hours: >0.02 %, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: >0.01 %, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 8.1 mg/l, Marinewater algae
Acute toxicity - microorganisms	LC ₅₀ , 10 days: 1267 mg/kg, Activated sludge
<u>Persistence and degradability</u>	
Persistence and degradability	The product is readily biodegradable.
Biodegradation	Water - Degradation 57.4%: 28 days
Biological oxygen demand	< 0.1 g O ₂ /g substance
Chemical oxygen demand	< 8.5 g O ₂ /g substance
<u>Bioaccumulative potential</u>	
Bio-Accumulative Potential	The product does not contain any substances expected to be bioaccumulating.
Partition coefficient	log Pow: < 3
<u>Mobility in soil</u>	
Mobility	The product is miscible with water and may spread in water systems.
<u>Other adverse effects</u>	
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.

14. Transport information

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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

This product does not contain any substances known to the State of California to cause cancer, birth defects or other reproductive harm.

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.

Inventories

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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

General information	Only trained personnel should use this material.
Issued by	Mike Hale Chemist
Revision date	3/22/2018
Revision	1022
Supersedes date	8/16/2017
SDS No.	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.
Signature	Mike Hale
NFPA - instability hazard	Normally stable. (0)
ACA HMIS Health rating.	Slight hazard. (1)
NFPA - health hazard	Irritation, minor residual injury. (1)
NFPA - flammability hazard	Will not burn. (0)
ACA HMIS Flammability rating.	Will not burn. (0)

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ACA HMIS Physical hazard rating. Normally stable. (0)

ACA HMIS Personal protection rating. A

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.