SAFETY DATA SHEET
ZOK MX

1. Identification

Product identifier
Product name ZOK MX

Recommended use of the chemical and restrictions on use
Application Cleaning compound, turbine engine gas path.

Details of the supplier of the safety data sheet
Supplier Zokman Products Inc.
1220 E. Gump Road
Fort Wayne
IN 46845
USA
+1 800 727 6027
+1 260 637 4038
+1 800 844 3227
+1 260 637 5031
zzokman@aol.com

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

Emergency telephone number
Emergency telephone 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
Pictogram

Signal word Warning
Hazard statements H319 Causes serious eye irritation.
ZOK MX

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

<table>
<thead>
<tr>
<th>Mixtures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Isotridecylalcohol, ethoxylated</td>
<td>10-30%</td>
</tr>
<tr>
<td>CAS number: 69011-36-5</td>
<td></td>
</tr>
<tr>
<td>Classification</td>
<td></td>
</tr>
<tr>
<td>Acute Tox. 4 - H302</td>
<td></td>
</tr>
<tr>
<td>Eye Irrit. 2A - H319</td>
<td></td>
</tr>
</tbody>
</table>

| 3-butoxypropan-2-ol       | 1-5% |
| CAS number: 5131-66-8     |   |
| Classification            |   |
| Skin Irrit. 2 - H315      |   |
| Eye Irrit. 2 - H319       |   |

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

4. First-aid measures

<table>
<thead>
<tr>
<th>Description of first aid measures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>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.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>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.</td>
</tr>
</tbody>
</table>

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. |
ZOK MX

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.

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.

Special hazards arising from the substance or mixture

Specific hazards

None known.

Hazardous combustion products

Carbon monoxide (CO). Carbon dioxide (CO2).

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.

Environmental precautions

Avoid discharge to the aquatic environment. Avoid the spillage or runoff entering drains, sewers or watercourses.

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.

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 contact with eyes. Avoid spilling.

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.
ZOK MX

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

Appearance Colorless liquid.

Color Colorless.

Odor Characteristic.

Odor threshold Not available.

pH pH (concentrated solution): 8.2-8.5

Melting point >0°C

Initial boiling point and range 100°C @ 760 mm Hg

Flash point > 100°C Pensky-Martens closed cup.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits Not known.

Vapor pressure Not applicable.

Vapor density Not applicable.
ZOK MX

Relative density 1.01 @ 20°C
Solubility(ies) Soluble in water.
Partition coefficient log Pow: < 3
Auto-ignition temperature Not applicable.
Decomposition Temperature Not applicable.
Viscosity 7.40 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. Average VOC content: 41.2 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 (CO2).

11. Toxicological information

Information on toxicological effects
Serious eye damage/irritation Causes eye irritation.
Germ cell mutagenicity Does not contain any substances known to be mutagenic.
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 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.
ZOK MX

Inhalation
May cause sensitisation by inhalation.

Ingestion
May cause stomach pain or vomiting.

Skin Contact
May be slightly irritating to skin.

Eye contact
May cause eye irritation.

Target Organs
No specific target organs known.

Toxicological information on ingredients.

Isotridecylalcohol, ethoxylated

<table>
<thead>
<tr>
<th>Acute toxicity - oral</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE oral (mg/kg)</td>
<td>500.0</td>
</tr>
</tbody>
</table>

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

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

Species
Rat

ATE oral (mg/kg)
2,100.0

12. Ecological information

Acute aquatic toxicity

Acute toxicity - fish
LC₅₀, 96 hours: 70.7 mg/l, Oncorhynchus mykiss (Rainbow trout)

Ecological information on ingredients.

Isotridecylalcohol, ethoxylated

<table>
<thead>
<tr>
<th>Acute aquatic toxicity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - fish</td>
<td></td>
</tr>
<tr>
<td>LC₅₀, 96 hours: &gt;0.20 mg/l, Marinewater fish</td>
<td></td>
</tr>
<tr>
<td>Acute toxicity - microorganisms</td>
<td></td>
</tr>
<tr>
<td>LC₅₀, 10 days: 140.3 mg/kg, Activated sludge</td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability

The product is biodegradable but it must not be discharged into drains without permission from the authorities.

Biodegradation
Inherently biodegradable.

Ecological information on ingredients.
ZOK MX

Isotridecylalcohol, ethoxylated

<table>
<thead>
<tr>
<th>Biodegradation</th>
<th>OECD 301A - Degradation &gt; 70%: 28 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>log Pow: &lt; 3</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td></td>
</tr>
<tr>
<td>Mobility in soil</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>The product is miscible with water and may spread in water systems.</td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>None known.</td>
</tr>
</tbody>
</table>

### 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

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

**UN Number**
**UN No. (International)** Not applicable.

**UN proper shipping name**
**Proper shipping name (International)** Not applicable.

**Transport hazard class(es)**
**Transport Labels (International)** No transport warning sign required.

**Packing group**
**Packing group (International)** 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.
ZOK MX

National regulations

Guidance
Workplace Exposure Limits EH40.

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
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 - 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.
## 16. Other information

<table>
<thead>
<tr>
<th>General information</th>
<th>Only trained personnel should use this material.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issued by</td>
<td>Craig Appleby - Chemist</td>
</tr>
<tr>
<td>Revision date</td>
<td>2/1/2019</td>
</tr>
<tr>
<td>Revision</td>
<td>2019</td>
</tr>
<tr>
<td>Supersedes date</td>
<td>3/22/2018</td>
</tr>
<tr>
<td>SDS No.</td>
<td>4526</td>
</tr>
<tr>
<td>SDS status</td>
<td>Approved.</td>
</tr>
</tbody>
</table>
| Hazard statements in full | H315 Causes skin irritation.  
|                     | H318 Causes serious eye damage.  
|                     | H319 Causes serious eye irritation.             |
| Signature           | Craig Appleby                                   |
| NFPA - health hazard| Irritation, minor residual injury. (1)          |
| NFPA - flammability hazard | Will not burn. (0)                             |
| NFPA - instability hazard | Normally stable. (0)                           |
| ACA HMIS Health rating. | Slight hazard. (1)                              |
| ACA HMIS Flammability rating. | Will not burn. (0)                             |
| 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.