

SECTION 1: IDENTIFICATION**1.1. IDENTIFICATION**

Product form : Mixtures
Product name : ZAF-2

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Recommended use : Non-Destructive Testing.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Manufacturer	Distributor
Magnaflux 155 Harlem Ave. Glenview, IL 60025 - USA T 847-657-5300	

1.4. EMERGENCY TELEPHONE NUMBER

Emergency number : CHEMTREC 800-424-9300

SECTION 2: HAZARD IDENTIFICATION**2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE**

The hazards given in this SDS apply to the product at full concentration. By diluting the product, the hazards will be reduced. It is up to the employer/user to determine the proper personal protection equipment and safety precautions when using diluted product.

GHS classification

Acute Tox. 4 (Oral)
Eye Dam. 1
Skin Sens. 1
STOT SE 3

2.2. LABEL ELEMENTS**GHS labelling**

Hazard pictograms (GHS) :



Signal word (GHS) :

Danger

Hazard statements (GHS) :

Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation

Precautionary statements (GHS) :

Avoid breathing dust/fume/gas/mist/vapours/spray. Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. OTHER HAZARDS

No additional information available

2.4. UNKNOWN ACUTE TOXICITY

Not applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1. SUBSTANCES**

Not applicable

3.2. MIXTURES

Name	Product identifier	%
Ethylene glycol	(CAS No) 107-21-1	50
5-Decyne-4,7-diol, 2,4,7,9-tetramethyl-	(CAS No) 126-86-3	50

SECTION 4: FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

- First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : IF ON SKIN: Wash with plenty of Water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after ingestion : IF SWALLOWED: Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting unless directed to do so by medical personnel. Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- Symptoms/injuries after inhalation : May cause irritation to the respiratory tract.
- Symptoms/injuries after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking. May cause an allergic skin reaction.
- Symptoms/injuries after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
- Symptoms/injuries after ingestion : Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

- Suitable extinguishing media : Dry chemical, CO2, dry sand, or alcohol-resistant foam. Water spray. limestone powder.
- Unsuitable extinguishing media : None known.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.
- Reactivity : No dangerous reactions known under normal conditions of use.

5.3. ADVICE FOR FIREFIGHTERS

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

- General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.1.1. FOR NON-EMERGENCY PERSONNEL

No additional information available

6.1.2. FOR EMERGENCY RESPONDERS

No additional information available

6.2. ENVIRONMENTAL PRECAUTIONS

Prevent entry to sewers and public waters.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

- For containment : Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment.
- Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal.

6.4. REFERENCE TO OTHER SECTIONS

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

- Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.
- Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

Prepared according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

Ethylene glycol (107-21-1)		
ACGIH	ACGIH Ceiling (mg/m ³)	100 mg/m ³ (aerosol only)
5-Decyne-4,7-diol, 2,4,7,9-tetramethyl- (126-86-3)		
Not applicable		

8.2. EXPOSURE CONTROLS

Appropriate engineering controls : Ensure good ventilation of the work station.
 Hand protection : Wear suitable gloves resistant to chemical penetration.
 Eye protection : Wear eye/face protection.
 Skin and body protection : Wear suitable protective clothing.
 Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
 Environmental exposure controls : Avoid release to the environment.
 Other information : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state : Liquid
 Appearance : No data available
 Colour : Light yellow
 Odour : Menthol
 Odour threshold : No data available
 pH : No data available
 Melting point : No data available
 Freezing point : No data available
 Boiling point : > 199 °C (>390°F)
 Flash point : > 110 °C (>230°F)
 Relative evaporation rate (butylacetate=1) : No data available
 Flammability (solid, gas) : No data available
 Vapour pressure : < 0.98 mm Hg @ 21°C (70°F)
 Relative vapour density at 20 °C : No data available
 Relative density : No data available
 Density : 62.428 lb/ft³ at 21°C (70°F)
 Solubility : No data available
 Partition coefficient n-octanol/water : No data available
 Auto-ignition temperature : No data available
 Decomposition temperature : No data available
 Viscosity, kinematic : No data available
 Viscosity, dynamic : No data available
 Explosive limits : No data available
 Explosive properties : No data available
 Oxidising properties : No data available

9.2. OTHER INFORMATION

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

No dangerous reactions known under normal conditions of use.

10.2. CHEMICAL STABILITY

Stable under normal conditions.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reactions known under normal conditions of use.

10.4. CONDITIONS TO AVOID

Heat. Incompatible materials.

10.5. INCOMPATIBLE MATERIALS

Materials reactive with hydroxyl compounds. Dehydrating agents. Oxidizing agents.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

May include, and are not limited to: oxides of carbon. Aldehydes. Various hydrocarbon fragments.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity (oral) : Oral: Harmful if swallowed.
 Acute toxicity (dermal) : Not classified.
 Acute toxicity (inhalation) : Not classified.

ATE CA (oral)	500.00000000 mg/kg bodyweight
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Ethylene glycol (107-21-1)	
LD50 oral rat	4700 mg/kg
LD50 dermal rat	10600 mg/kg

5-Decyne-4,7-diol, 2,4,7,9-tetramethyl- (126-86-3)	
LD50 oral rat	> 500 mg/kg
LD50 dermal rabbit	> 1000 mg/kg
LC50 inhalation rat	> 20 mg/l (Exposure time: 1 h)

Skin corrosion/irritation : Not classified.
 Serious eye damage/irritation : Causes serious eye damage.
 Respiratory or skin sensitisation : May cause an allergic skin reaction.
 Germ cell mutagenicity : Not classified.
 Carcinogenicity : Not classified.
 Reproductive toxicity : Not classified.
 STOT-single exposure : May cause respiratory irritation.
 STOT-repeated exposure : Not classified.
 Aspiration hazard : Not classified.
 Symptoms/injuries after inhalation : May cause irritation to the respiratory tract.
 Symptoms/injuries after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking. May cause an allergic skin reaction.
 Symptoms/injuries after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
 Symptoms/injuries after ingestion : Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
 Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Ethylene glycol (107-21-1)	
LC50 fish 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

12.2. PERSISTENCE AND DEGRADABILITY

ZAF-2	
Persistence and degradability	Not established.

12.3. BIOACCUMULATIVE POTENTIAL

ZAF-2	
Bioaccumulative potential	Not established.
Ethylene glycol (107-21-1)	
Partition coefficient n-octanol/water	-1.93

12.4. MOBILITY IN SOIL

No additional information available

12.5. OTHER ADVERSE EFFECTS

Effect on the global warming : No known effects from this product.
Other information : No other effects known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: TRANSPORT INFORMATION

In accordance with DOT/TDG/IATA/IMDG

DOT (bulk) : Not regulated for transport
DOT (non-bulk) : Not regulated for transport
Transportation of Dangerous Goods : Not regulated for transport
IATA : Not regulated for transport
IMDG : Not regulated for transport

SECTION 15: REGULATORY INFORMATION

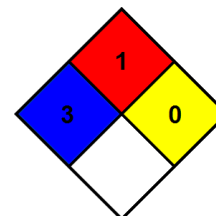
15.1. FEDERAL REGULATIONS

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

Ethylene glycol (107-21-1)	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb
SARA Section 313 - Emission Reporting	1 %

NFPA health hazard : 3
NFPA fire hazard : 1
NFPA reactivity : 0



15.2. INTERNATIONAL REGULATIONS

No additional information available

15.3. US STATE REGULATIONS

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

Ethylene glycol (107-21-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	Yes	No	No	

Prepared according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Ethylene glycol (107-21-1)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION

Revision date : 02/06/2017
Other information : None.
Prepared by : Nexreg Compliance Inc.
www.Nexreg.com



SDS HazCom 2012 - WHMIS 2015 (Nexreg_MAGNAFLUX)

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