



Safety Data Sheet SAFE-BREAK† ZINC

1. Identification

1.1 Product identifier

Product name SAFE-BREAK† ZINC

Product code 10301

This product may not be distributed or used in Canada.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Completion fluid additive.

Uses advised against Consumer use

1.3 Details of the supplier of the safety data sheet

Supplier
M-I L.L.C.

P.O.Box 42842
Houston, TX 77242
www.miswaco.slb.com
Telephone: 1 281-561-1511

Prepared by
Global Regulatory Compliance - Chemicals (GRC - Chemicals)

1.4 Emergency Telephone Number

Emergency telephone (24 Hour) Australia +61 2801 44558, Asia Pacific +65 3158 1074, China +86 10 5100 3039, Europe +44 (0) 1235 239 670, Middle East and Africa +44 (0) 1235 239 671, New Zealand +64 9929 1483, USA 001 281 561 1600

2. Hazards identification

2.1 Classification of the substance or mixture

GHS - Classification

Health hazards

Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

Environmental hazards

Chronic aquatic toxicity	Category 3
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Physical Hazards

Flammable Liquids	Category 2
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2.2 Label elements



Signal word
DANGER

Hazard statements

H318 - Causes serious eye damage
H336 - May cause drowsiness or dizziness
H412 - Harmful to aquatic life with long lasting effects
H225 - Highly flammable liquid and vapor

Precautionary statements

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
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
P310 - Immediately call a POISON CENTER or doctor/ physician
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P330 - Rinse mouth
P337 + P313 - If eye irritation persists: Get medical advice/attention
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents/ container to an approved waste disposal plant

Unknown acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity.

3. Composition/information on Ingredients

3.1 Substances

Not Applicable

3.2 Mixtures

Component	CAS-No	Weight % - range
Isopropyl alcohol	67-63-0	60 - 100
Quaternary ammonium compounds	Proprietary	10 - 30
Organic Solvent	Proprietary	5 - 10

Comments

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret

4. First aid measures

4.1 First-Aid Measures

Inhalation	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
Ingestion	Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Seek medical attention if irritation occurs.
Skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur.
Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

General advice The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms develop, the casualty should be transferred to hospital as soon as possible.

Main symptoms

Inhalation	Please see Section 11. Toxicological Information for further information.
Ingestion	Please see Section 11. Toxicological Information for further information.
Skin contact	Please see Section 11. Toxicological Information for further information.
Eye contact	Please see Section 11. Toxicological Information for further information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing media appropriate for surrounding material.

Extinguishing media which shall not be used for safety reasons

Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Unusual fire and explosion hazards

Flammable liquid. Vapors may form explosive mixtures with air. Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.). Vapors may travel considerable distance to source of ignition and flash back. Heating of containers may cause pressure rise, with risk of bursting.

Hazardous combustion products

If heated strongly or burned, oxides of carbon and nitrogen, ammonia, chlorine oxides, hydrogen chloride and organic fumes are released.

5.3 Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

Special Fire-Fighting Procedures

Cool fire-exposed containers using water spray.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment identified in Section 8. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Evacuate and ventilate the area. Prevent further leakage or spillage if safe to do so.

6.2 Environmental precautions

The product should not be allowed to enter drains, water courses or the soil.

Environmental exposure controls

Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. After cleaning, flush away traces with water.

6.4 Reference to other sections

See section 13 for more information.

7. Handling and storage

7.1 Precautions for safe handling

Handling

Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Avoid spills and splashing during use. Avoid static electricity build up with connection to earth. Keep away from heat, sparks and open flame. No smoking.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions Ensure adequate ventilation. Keep airborne concentrations below exposure limits.

Storage precautions Keep containers tightly closed in a dry, cool and well-ventilated place. Do not freeze Avoid extreme temperatures.

8. Exposure controls/personal protection

8.1 Control parameters

Component	ACGIH TLV	OSHA PEL
Isopropyl alcohol	200 ppm, 400 ppm (STEL)	400 ppm
Quaternary ammonium compounds	Not Determined	Not Determined
Organic Solvent	Not Determined	Not Determined

8.2 Exposure controls

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

Engineering measures to reduce exposure

Ensure adequate ventilation.

Personal protective equipment

Eye protection	It is good practice to wear goggles when handling any chemical. Tightly fitting safety goggles.
Hand protection	Use protective gloves made of:., Rubber or plastic gloves, Be aware that liquid may penetrate the gloves. Frequent change is advisable.
Respiratory protection	In case of insufficient ventilation wear suitable respiratory equipment Chemical respirator with inorganic vapour cartridge (Grey B).
Skin and body protection	Wear suitable protective clothing, Provide eyewash station.
Hygiene measures	Wash hands before eating, drinking or smoking, Remove and wash contaminated clothing before re-use.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Appearance	No information available
Color	Clear or Amber
Odor	Alcohol
Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
pH	No information available	
pH @ dilution	No information available	
Melting/freezing point	No information available	
Boiling point/range	> 82 °C / 180 °F	
Flash point	21 °C / 70 °F	
Evaporation rate (BuAc =1)	No information available > 1	
Flammability (solid, gas)	Not Applicable	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower flammability limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	0.88 - 0.92	@ 68 °F / 20 °C
Bulk density	No information available	
Water solubility	Soluble in water	
Solubility in other solvents	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Log Pow	No information available	

Explosive properties No information available
Oxidizing properties No information available

9.2 Other information

Pour point No information available
Molecular weight No information available
VOC content(%) No information available
Density No information available

10. Stability and reactivity

10.1 Reactivity

Flammable liquid and vapor. Contact with strong bases liberates ammonia. Liberates poisonous chlorine gas on contact with acid.

10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

10.3 Possibility of Hazardous Reactions

Hazardous polymerization

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Protect from freezing. Avoid extreme temperatures.

10.5 Incompatible materials

Acids. Bases. Oxidizing agents.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Inhalation May cause respiratory irritation. May cause drowsiness or dizziness.

Eye contact Causes serious eye damage.

Skin contact Prolonged skin contact may defat the skin and produce dermatitis.

Ingestion Ingestion may cause irritation to mucous membranes.

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isopropyl alcohol	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m ³ (Rat) 4 h
Quaternary ammonium compounds	= 580 mg/kg (Rat)	No data available	No data available
Organic Solvent	= 1540 mg/kg (Rat)	No data available	> 5100 mg/m ³ (Rat) 4 h

Component	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA listed carcinogens	NTP
Isopropyl alcohol	No data available	A4 Not Classifiable as a Human Carcinogen	No data available	No data available
Quaternary ammonium compounds	No data available	No data available	No data available	No data available

Organic Solvent	No data available	No data available	No data available	No data available
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Sensitization	As a precaution the product should be treated as a sensitizer.
Mutagenic effects	This product does not contain any known or suspected mutagens.
Carcinogenicity	This product does not contain any known or suspected carcinogens.
Reproductive toxicity	None known.
Developmental toxicity	Not known to cause birth defects or have a deleterious effect on a developing fetus.
Routes of exposure	Skin contact. Eye contact. Inhalation.
Routes of entry	Skin contact. Eye contact. Inhalation.
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Not classified.
Aspiration hazard	Not classified.

12. Ecological information

12.1 Toxicity

Toxicity to algae

See component information below.

Toxicity to fish

See component information below.

Toxicity to daphnia and other aquatic invertebrates

See component information below.

Component	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Isopropyl alcohol 67-63-0 (60 - 100)	> 1400000 µg/L LC50 Lepomis macrochirus 96 h = 11130 mg/L LC50 Pimephales promelas 96 h = 9640 mg/L LC50 Pimephales promelas 96 h	> 1000 mg/L EC50 Desmodesmus subspicatus 72 h > 1000 mg/L EC50 Desmodesmus subspicatus 96 h	= 13299 mg/L EC50 Daphnia magna 48 h
Quaternary ammonium compounds (10 - 30)	No information available	No information available	No information available
Organic Solvent (5 - 10)	220 - 460 mg/L LC50 Leuciscus idus 96 h	= 360 mg/L EC50 Desmodesmus subspicatus 72 h = 79 mg/L EC50 Desmodesmus subspicatus 96 h	> 500 mg/L EC50 Daphnia magna Straus 48 h

12.2 Persistence and degradability

Not Applicable - Inorganic chemical.

12.3 Bioaccumulative potential

Does not bioaccumulate.

12.4 Mobility in soil

Soluble in water.

12.5 Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)
This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

12.6 Other adverse effects.

None known.

13. Disposal considerations

13.1 Waste treatment methods

Disposal Method Disposal should be made in accordance with federal, state and local regulations.

Contaminated packaging Do not re-use empty containers. Empty containers may contain flammable or explosive vapors. Do not burn, or use a cutting torch on, the empty drum. Dispose of in accordance with local regulations.

14. Transport information

14.1 UN Number

UN No. (DOT)	UN1993
UN/ID No. (ADR/RID/ADN/ADG)	UN1993
UN No. (IMDG)	UN1993
UN No. (ICAO)	UN1993

14.2 Proper shipping name

FLAMMABLE LIQUID, N.O.S. (contains isopropanol)

14.3 Hazard class(es)

DOT Hazard class	3
ADR/RID/ADN/ADG Hazard class	3
IMDG Hazard class	3
ICAO Hazard class/division	3

14.4 Packing group

DOT Packing group	PG II
ADR/RID/ADN/ADG Packing group	PG II
IMDG Packing group	PG II
ICAO Packing group	PG II



14.5 Environmental hazard

Marine pollutant No

14.6 Special precautions

Not Applicable

15. Regulatory information

International inventories

USA (TSCA)	Complies
Canada (DSL)	Complies.
European Union (EINECS and ELINCS)	Does not Comply
Philippines (PICCS)	Complies
Japan (ENCS)	Complies
China (IECSC)	Complies
Australia (AICS)	Complies
Korean (KECL)	Complies
New Zealand (NZIoC)	Complies

U.S. Federal and State Regulations

Component	SARA 302 / TPQs	SARA 313	CERCLA RQ
Isopropyl alcohol	N/A	1.0 %	N/A
Quaternary ammonium compounds	N/A	N/A	N/A
Organic Solvent	N/A	N/A	N/A

State Comments

Proposition 65: This product is not known to contain chemicals considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer and/or reproductive toxicity at levels that are expected to pose a significant risk under anticipated use conditions.

This product may not be distributed or used in Canada.

16. Other information

Supersedes date 29/May/2015

Revision date 04/Jan/2016

Version 4

The following sections have been revised: 2. Hazards Identification 3. Composition/information on Ingredients 5. Fire-fighting measures 7. Handling and storage 11. Toxicological information 13. Disposal considerations Section 16: Other information.

HMIS classification

Health	3*
Flammability	3
Physical hazard	0
PPE	X

N/A - Not Applicable, N/D - Not Determined.

†A mark of M-I L.L.C.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.