

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND MANUFACTURER'S IDENTIFICATION

Product ID: 498755
Product Name: ZenaMelt
Revision Date: Oct 13, 2021
Version: 2.0
Manufacturer's Name: Zenex International
Address: One Zenex Circle Cleveland, OH, US, 44146
Emergency Phone: 1-800-535-5053
Information Phone Number: (440)232-4155
Fax:
Product/Recommended Uses: Frost & Ice Remover

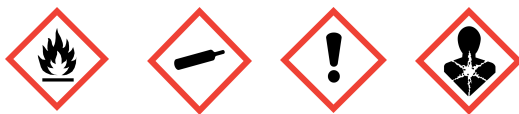
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SECTION 2) HAZARDS IDENTIFICATION

Classification

Aerosols - Category 1
Gases Under Pressure - Liquefied Gas
Acute Toxicity Dermal - Category 4
Acute Toxicity Inhalation - Category 4
Acute Toxicity Oral - Category 4
Reproductive Toxicity - Category 2
Specific Target Organ Toxicity - Repeated Exposure - Category 2
Specific Target Organ Toxicity - Single Exposure - Category 1

Pictograms



Signal Word

Danger

Hazardous Statements - Physical

H222 - Extremely flammable aerosol.
H280 - Contains gas under pressure; may explode if heated.

Hazardous Statements - Health

H312 - Harmful in contact with skin.
H332 - Harmful if inhaled.
H302 - Harmful if swallowed.
H361 - Suspected of damaging fertility or the unborn child.

H373 - May cause damage to organs through prolonged or repeated exposure.

H370 - Causes damage to organs.

Precautionary Statements - General

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

Precautionary Statements - Prevention

P280 - Wear protective gloves, protective clothing, eye protection and face protection.

P270 - Do not eat, drink or smoke when using this product.

P260 - Do not breathe mist, vapors or spray.

P271 - Use only outdoors or in a well-ventilated area.

P264 - Wash hands thoroughly after handling.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 - Do not spray on an open flame or other ignition source.

P251 - Do not pierce or burn, even after use.

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

Precautionary Statements - Response

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.

P362 + P364 - Take off contaminated clothing and wash it before reuse.

P312 - Call a POISON CENTER or doctor if you feel unwell.

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 - Call a POISON CENTER or doctor if you feel unwell.

P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.

P308 + P313 - IF exposed or concerned: Get medical attention.

P314 - Get medical attention if you feel unwell.

Precautionary Statements - Storage

P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

P403 + P405 - Store in a well-ventilated place. Store locked up.

Precautionary Statements - Disposal

P501 - Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 3) COMPOSITION, INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000067-56-1	METHANOL	40% - 66%
0000107-21-1	ETHYLENE GLYCOL	6% - 12%
0000124-38-9	CO2	2% - 5%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If exposed/If you feel unwell/If concerned: Call a POISON CENTER/doctor. Eliminate all ignition sources if safe to do so.

Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before re-use. IF exposed or concerned: Get medical advice/attention.

Ingestion

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

Most Important Symptoms/Effects, Acute and Delayed

No data available.

Indication of Immediate Medical Attention and Special Treatment Needed

No data available.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only. Do not direct a solid stream of water or foam into hot, burning pools this may result in frothing and increase fire intensity.

Unsuitable Extinguishing Media

No data available.

Specific Hazards in Case of Fire

Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Product is highly flammable and forms explosive mixtures with air, oxygen, and all oxidizing agents. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a build up of internal pressures. Cool with water. Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Container could potentially burst or be punctured upon mechanical impact, releasing flammable vapors.

Fire-Fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area.

Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended Equipment

Wear liquid tight chemical protective clothing in combination with positive pressure self-contained breathing apparatus (SCBA).

Personal Precautions

Avoid breathing vapor. Avoid contact with skin, eye or clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning Up

Absorb liquids in vermiculite, dry sand, earth, or similar inert material and deposit in sealed containers for disposal.

SECTION 7) HANDLING/STORAGE

General

Wash hands after use.
Do not get in eyes, on skin or on clothing.
Do not breathe vapors or mists.
Use good personal hygiene practices.
Eating, drinking and smoking in work areas is prohibited.
Remove contaminated clothing and protective equipment before entering eating areas.
Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements

Do not cut, drill, grind, weld or perform similar operations on or near containers. Do not pressurize containers to empty them.
Store at temperatures below 120°F.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA TWA (mg/m3)	OSHA TWA (ppm)	OSHA STEL (mg/m3)	OSHA Carcinogen	OSHA Skin designation	OSHA Tables (Z1, Z2, Z3)	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)
CO2	9000	5000				1		5000
ETHYLENE GLYCOL								25 (v)
METHANOL	260	200				1		200

Chemical Name	NIOSH STEL (ppm)	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH Carcinogen	ACGIH TLV Basis	ACGIH Notations	NIOSH TWA (mg/m3)	NIOSH TWA (ppm)
CO2	30000		30000		Asphyxia		9000	5000
ETHYLENE GLYCOL		10 (I,H)	50 (v)	A4	URT irr	A4		
METHANOL	250		250		Headache; eye dam; dizziness; nausea	Skin; BEI	260	200

Chemical Name	NIOSH STEL (mg/m3)	OSHA STEL (ppm)	NIOSH Carcinogen
CO2	54000		
ETHYLENE GLYCOL			
METHANOL	325		

(C) - Ceiling limit, A4 - Not Classifiable as a Human Carcinogen, BEI - Substances for which there is a Biological Exposure Index or Indices, dam - Damage, eff - Effects, irr - Irritation, repro - reproductive, URT - Upper respiratory tract

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	7.41 lb/gal
Density VOC	4.99 lb/gal
% VOC	67.28%

Appearance	N.A.
Odor Threshold	N.A.
Odor Description	N.A.
pH	N.A.
Water Solubility	N.A.
Flammability	N.A.
Vapor Pressure	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Melting Point	N.A.
Vapor Density	N.A.
Freezing Point	N.A.
Low Boiling Point	N.A.
High Boiling Point	N.A.
Decomposition Pt	N.A.
Auto Ignition Temp	N.A.
Evaporation Rate	Slower than ether

SECTION 10) STABILITY AND REACTIVITY

Stability

The product is stable under normal storage conditions.

Conditions to Avoid

Avoid heat, sparks, flame, high temperature and contact with incompatible materials.
Dropping containers may cause bursting.

Incompatible Materials

Avoid strong oxidizers, reducers, acids, and alkalis.

Hazardous Reactions/Polymerization

Will not occur.

Hazardous Decomposition Products

No data available.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation

Based on available data, the classification criteria are not met.

Likely Route of Exposure

Inhalation, ingestion, skin absorption.

Serious Eye Damage/Irritation

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Germ Cell Mutagenicity

Based on available data, the classification criteria are not met.

Reproductive Toxicity

Suspected of damaging fertility or the unborn child.

Respiratory/Skin Sensitization

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Single Exposure

Causes damage to organs.

Specific Target Organ Toxicity - Repeated Exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard

Based on available data, the classification criteria are not met.

Acute Toxicity

Harmful in contact with skin.

Harmful if inhaled.

Harmful if swallowed.

Likely Routes of Exposure

Inhalation, Ingestion, Skin contact, Eye contact.

Potential Health Effects - Miscellaneous

0000067-56-1 METHANOL

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: eyes, kidneys, liver, skin. Excessive human exposure to methanol may lead to: fatigue, headache, anaesthetic, neurologic effects, and visual difficulties including blindness or death. Recurrent overexposure may result in liver and kidney injury. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother. Ingestion may cause any of the following: blindness. Eye contact may cause any of the following: conjunctivitis, mild irritation, corneal opacity.

0000109-86-4 2-METHOXYETHANOL

The substance may have effects on the blood and bone marrow. This may result in anaemia and lesions of blood cells.

0000110-91-8 MORPHOLINE

LC50 (rat): 2250 ppm/duration not reported (male rat) (1,9); 2150 ppm/duration not reported (female rat) (1,9); greater than 22.2 mg/L (6240 ppm)/1-hr exposure (12)
LC50 (mouse): 1320 mg/m3 (371 ppm)/2-hr exposure (reported but cannot be confirmed)
LD50 (oral, rat): 1600 mg/kg (7,12,13); 1050 mg/kg (3,7,9,12)
LD50 (oral, mouse): 525 mg/kg (16); 720 mg/kg (15)
LD50 (oral, guinea pig): 900 mg/kg (7,12,13)
LD50 (skin, rabbit): 0.5 mL/kg/24-hr (500 mg/kg/24-hr) (undiluted) (3,7,12,16)
Lethal dose (oral, rat or guinea pig): 0.1 g/kg (undiluted, not neutralized); all animals died rapidly. When diluted with 4 volumes of water, the minimum lethal dose was 0.9 g/kg (guinea pig) or 1.6 g/kg (rat) (13).

0000067-56-1 METHANOL

LC50 (rat): 64000 ppm (4-hour exposure) (14, unconfirmed)
LD50 (oral, rat): 5628 mg/kg (14, unconfirmed)
LD50 (oral, 14-day old rat): 5850 mg/kg (cited as 7.4 mL/kg) (15)
LD50 (oral, young adult rat): 10280 mg/kg (cited as 13.0 mL/kg) (15)
LD50 (oral, monkey): 3000 mg/kg (1/1 animal died) (16) LD50 (dermal, rabbit): 15800 mg/kg (cited as 20 mL/kg) (17 citing unpublished information)

0000107-21-1 ETHYLENE GLYCOL

LD50 (oral, rat): 5.89 g/kg; 8.54 g/kg; 13.0 g/kg (5)
LD50 (oral, mouse): 7.5 g/kg; 15.28 g/kg (5,6)
LD50 (oral, guinea pig): 6.6 g/kg; 11.0 g/kg (5)
LD50 (oral, rabbit): 5.0 g/kg (5)
LD50 (dermal, rabbit): 9.5 g/kg (6)

0000109-86-4 2-METHOXYETHANOL

LC50 (mouse): 1480 ppm (7-hour exposure) (1)
LD50 (oral, rat): 2460 mg/kg (19); 3250 mg/kg (18)
LD50 (oral, guinea pig): 950 mg/kg (18,19)
LD50 (oral, rabbit): 890 mg/kg (18)
LD50 (dermal, rabbit): 1300 mg/kg (cited as 1.34 mL/kg) (24-hours contact)(18)

0000107-15-3 ETHYLENEDIAMINE

LC50 (mouse): 300 mg/m3 (exposure duration not reported) (1) LETHAL CONCENTRATION (rat): 4000 ppm (8-hr exposure); 6 of 6 rats died.2000 ppm (8-hr exposure); 0 of 6 rats died.(2)
LD50 (dermal, rabbit): 657 mg (730 mL)/kg body weight.(2)
LD50 (oral, rat): 1160 mg/kg body weight.(2)
LD50 (oral, rat): 500 mg/kg body weight.(1)
LD50 (oral, guinea pig): 470 mg/kg.(1)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

Based on available data, the classification criteria are not met.

Persistence and Degradability

No data available.

Bioaccumulative Potential

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

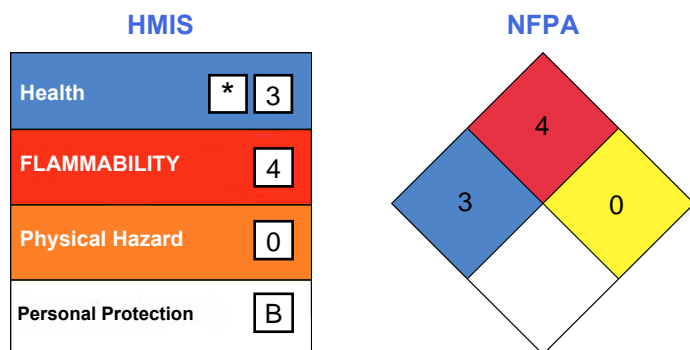
	U.S. DOT Information	IMDG Information	IATA Information
UN number:	UN1950	UN1950	UN1950
Proper shipping name:	Aerosols	Aerosols	Aerosols, flammable
Hazard class:	2.1	2.1	2.1
Packaging group:	N.A.	N.A.	N.A.
Hazardous substance (RQ):	No Data Available		
Marine Pollutant:	No Data Available	No Data Available	
Note / Special Provision:	(LTD QTY)	(LTD QTY)	(LTD QTY)
Toxic-Inhalation Hazard:	No Data Available		

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000067-56-1	METHANOL	40% - 66%	SARA313, CERCLA, HAPS, SARA312, VOC, TSCA, RCRA, ACGIH, California Proposition 65 Developmental, OSHA
0000107-21-1	ETHYLENE GLYCOL	6% - 12%	SARA313, CERCLA, HAPS, SARA312, VOC, TSCA, ACGIH, California Proposition 65 Developmental
0000124-38-9	CO2	2% - 5%	SARA312, TSCA, ACGIH, OSHA
0000109-86-4	2-METHOXYETHANOL	Trace	SARA313, CERCLA, HAPS, SARA312, VOC, TSCA, ACGIH, California Proposition 65 Developmental - Male, OSHA

Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.



(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

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