CRYOTECH QS50®SOLID DEICER

Safety Data Sheet

SECTION 1 – IDENTIFICATION

PRODUCT IDENTIFIER

Cryotech QS50® Solid Deicer

OTHER MEANS OF IDENTIFICATION

None

RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE

Deicing/anti-icing runways and other pavements and structures

RESPONSIBLE PARTY INFORMATION

Name/Address	Cryotech Deicing Technology 6103 Ortho Way Fort Madison, IA 52627 United States
Contact information	Telephone: (800) 346-7237 Email: deicers@cryotech.com Website: www.cryotech.com

EMERGENCY PHONE NUMBER

CHEMTREC: 1(800) 424-9300 or +1(703) 527-3887
CCN5925

SECTION 2 – HAZARD IDENTIFICATION

HAZARD INFORMATION ACCORDING TO OSHA HAZCOM 2024

Hazard classification	Eye Damage/Irritation Category 2B
Signal word	Warning
Hazard statement(s)	Causes eye irritation
Hazard symbol(s)	No pictogram
Precautionary statement(s)	
Prevention	Wash hands and exposed skin thoroughly after handling.
Response	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Hazards not otherwise classified	None

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURES

Chemical Name	Common name and synonyms	CAS number	%(wt.)
Sodium acetate – anhydrous	Sodium ethanoate; Sodium salt of acetic acid	127-09-3	50
Sodium formate	Sodium methanoate; Sodium salt of formic acid	141-53-7	50

Composition comments This product may contain small amounts of nonhazardous additives such as corrosion inhibitors, anti-caking agents, and colorants.

SECTION 4 – FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURE

Inhalation If inhaled, remove to fresh air. Get medical advice if cough or other symptoms appear.

Skin Wash hands and exposed skin thoroughly after handling.

Eye If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion If swallowed, give milk or water to drink and telephone for medical advice. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED

May cause temporary eye irritation. Symptoms may include temporary discomfort, excessive blinking, tear production, redness, and/or swelling. May cause itching or irritation of any cut or abraded skin. Prolonged contact may cause dry skin. Inhalation of dust during handling may cause minor respiratory tract irritation and coughing. Ingestion of large quantities may cause nausea, vomiting, diarrhea, and/or abdominal discomfort.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

If you feel unwell, seek medical advice. Treat symptomatically.

SECTION 5 – FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA

Water, carbon dioxide, or dry chemical. Use extinguishing media appropriate for the surrounding environment.

UNSUITABLE EXTINGUISHING MEDIA

Not applicable

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

None expected

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS

Wear protective equipment suitable for the surrounding environment.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

Avoid eye/skin contact with spilled material. Provide adequate ventilation to avoid breathing of dust. Wear appropriate personal protective equipment (refer to Section 8 of this SDS).

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

If product is dry, sweep or vacuum up spill taking care to provide adequate ventilation and to avoid generating dust. If product is dissolved, contain and/or absorb spill with inert material (e.g., sawdust, sand, kitty litter). Scoop up material and transfer to disposal container. If needed, rinse spillage area with plenty of water.

SECTION 7 – HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Avoid eye/skin contact. Avoid breathing of dust. Wear appropriate personal protective equipment (refer to Section 8 of this SDS). Wash hands thoroughly after use. Change contaminated clothing.

PRECAUTIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store in tightly sealed containers, away from direct heat and strong oxidizing agents. Do not store or handle product in systems constructed of wetted parts consisting of galvanized steel, zinc, or brass components. Protect bags from physical damage. This product is very hygroscopic (i.e., can absorb humidity from air) and may clump/set up if exposed to moisture in storage.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

US OSHA PERMISSIBLE EXPOSURE LIMIT (PEL)

No specific limits established. As a guideline, US OSHA has established the following limits for dust, nuisance dust, inert dust, particulates not otherwise regulated (PNOR): 8-hr TWA limits 5 mg/m^3 (15 mppcf) [respirable fraction], 15 mg/m^3 (50 mppcf) [total dust].

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS THRESHOLD LIMIT VALUE (TLV)

No TLV established. As a guideline, ACGIH has recommended that airborne concentrations be kept below 3 mg/m^3 (respirable particles) and 10 mg/m^3 (inhalable particles).

APPROPRIATE ENGINEERING CONTROLS

Have eyewash stations available. Ensure adequate ventilation, especially in confined areas.

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT

Wear safety glasses with side shields or safety goggles. Chemical-resistant gloves are not usually necessary, but should be worn if prolonged exposure is possible. Clothing should be suitable to protect skin (e.g., long sleeves, long pants). Avoid breathing dust. If conditions create high airborne concentrations of this product, use an approved respirator, such as an N95 mask. Always use good personal hygiene habits when using this product, such as avoiding touching the face, and thoroughly and regularly washing hands.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid granules/spherical pellets
Color	White or blue
Odor	Odorless to mild vinegar odor (odor threshold not applicable)
Melting point/freezing point	258°C sodium formate portion, 324°C sodium acetate portion
Boiling point	Not applicable
Flammability	Not flammable
Explosive limits (lower and upper)	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Data not available
Decomposition temperature	>400°C
pH	~11.5 (aqueous solution)
Kinematic viscosity	Not applicable
Solubility	Soluble in water
Partition coefficient n-octanol/water	Data not available
Vapor pressure	0 Pa at 25°C
Relative density	>1
Relative vapor density	Not applicable
Particle characteristics	Typical particle size is approx. 1.7 – 2.4 mm

SECTION 10 – STABILITY AND REACTIVITY

REACTIVITY
This product is expected to be non-reactive under normal conditions of use, storage, and transport.

CHEMICAL STABILITY
Stable. Polymerization will not occur.

POSSIBILITY OF HAZARDOUS REACTIONS, INCLUDING THOSE ASSOCIATED WITH FORESEEABLE EMERGENCIES
In unventilated/closed systems, especially where moisture is present, this product may slowly oxidize reactive metals such as magnesium or zinc resulting in gradual liberation of hydrogen gas which may accumulate over time.

CONDITIONS TO AVOID
Avoid prolonged contact with reactive metals such as magnesium and zinc in closed systems.

INCOMPATIBLE MATERIALS
Strong oxidizing agents; strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS
May decompose into oxides of carbon (e.g., CO, CO_2).

SECTION 11 – TOXICOLOGICAL INFORMATION

INFORMATION ON LIKELY ROUTES OF EXPOSURE
Ingestion is unlikely during normal operations. Inhalation of dust is most likely when in confined areas. Skin contact may occur from loading operations. Eye contact is possible from airborne particles or dust during deicing operations, or from touching eyes with contaminated hands.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL, AND TOXICOLOGICAL CHARACTERISTICS
May cause acute, temporary eye irritation, excessive blinking, or tearing. Corneal injury is unlikely. May cause irritation or itching of cut or abraded skin. Repeated or prolonged skin exposure may cause dryness. Inhalation of dust during handling may cause temporary respiratory tract irritation and coughing. Ingestion of large quantities may cause nausea, vomiting, diarrhea, and/or abdominal discomfort.

DELAYED AND IMMEDIATE EFFECTS AND CHRONIC EFFECTS FROM SHORT- AND LONG-TERM EXPOSURE
Exposure may result in immediate temporary eye irritation or minor skin irritation/dryness. This product is not expected to produce serious delayed or chronic effects from short- or long-term exposure.

NUMERICAL MEASURES OF TOXICITY
LD50 rat-oral: > 3 g/kg for both sodium acetate and sodium formate
LD50 mouse-oral: > 11 g/kg (sodium formate), ~ 7 g/kg (sodium acetate)
LD50 rat-dermal: > 2 g/kg (sodium formate)
LC50 rat-inhalation: >0.67 mg/m^3 (maximum attainable dust concentration of sodium formate) produced no signs of toxicity, >30 g/m^3/1H (sodium acetate)

INTERACTIVE EFFECTS
None known.

CARCINOGENIC INFORMATION
No component in this product is listed in the National Toxicology Program (NTP) Report on Carcinogens or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs or by OSHA.

SECTION 12 – ECOLOGICAL INFORMATION

ECOTOXICITY
Acute Fish Toxicity (Pimephales promelas, static system 96 hr LC50): 8025 mg/L
Acute Daphnid Toxicity (Daphnia magna, static system 48 hr LC50): 4250 mg/L

PERSISTENCE AND DEGRADABILITY
Biodegradable. COD (TOD): 0.30 kg O2/kg deicer; BOD5 (20°C): 0.05 kg O2/kg deicer

BIOACCUMULATIVE POTENTIAL
Bioaccumulation is not expected.

MOBILITY IN SOIL
Adverse effects not expected.

OTHER ADVERSE EFFECTS
None expected.

SECTION 13 – DISPOSAL CONSIDERATIONS

WASTE RESIDUES AND INFORMATION ON SAFE HANDLING AND METHODS OF DISPOSAL
Based on available information, this product is neither listed as a hazardous waste nor does it exhibit any of the characteristics that would cause it to be classified as a characterized hazardous waste under the US Resource Conservation and Recovery Act (RCRA). If recovered product is not fit for use, dispose of contents/container in accordance with local, state, regional, national, and/or international regulations.

SECTION 14 – TRANSPORT INFORMATION

UN number	Not applicable. This material is not regulated as dangerous per US DOT or IATA/ICAO.
UN proper shipping name	Not applicable
Transport hazard class(es)	Not applicable
Packing group	Not applicable
Environmental hazards	Not applicable. This material is not a Marine pollutant.
Transport in bulk	Consult IMO regulations before transporting ocean bulk.
Special precautions	Not applicable

SECTION 15 – REGULATORY INFORMATION

INVENTORY LISTS
All of the components in this product are on the following inventory lists: US (TSCA), Canada (DSL/NDSL), Europe (EINECS); or not required to be listed.

TSCA SECTION 12(B)
None of the chemicals in this product are listed under US EPA Toxic Substances Control Act (TSCA) Section 12(b).

CERCLA HAZARDOUS SUBSTANCES
This material, as supplied, does not contain any chemicals regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302). There is no CERCLA Reportable Quantity for this material. There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA) SECTION 313
None of the chemicals in the product are subject to reporting under the US EPA Toxics Release Inventory (TRI) program.

HAZARD CATEGORIES FOR EPCRA 311 / 312

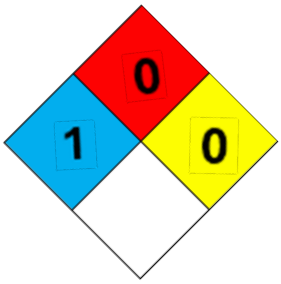
Health hazard	
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Aspiration hazard	No
Reproductive toxicity	No
Germ cell mutagenicity	No
Skin corrosion or irritation	No
Respiratory or skin sensitization	No
Serious eye damage or eye irritation	Yes
Specific organ toxicity (single or repeated exposure)	No
Simple asphyxiant	No
Hazard not otherwise classified (HNOC)	No

Physical hazard	
Flammable (gases, aerosols, liquids or solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (liquid or solid)	No
Pyrophoric gas	No
Oxidizer (liquid, solid or gas)	No
Organic peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible dust	No
Corrosive to metal	No
Hazard not otherwise classified (HNOC)	No

CLEAN WATER ACT

None of the chemicals in this product are listed as Priority Pollutants under the US EPA CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the US EPA CWA.

NFPA 704



SECTION 16 – OTHER INFORMATION

SDS REVISION DATE

This SDS was revised on **July 31, 2026.**
The latest version can be obtained by contacting Cryotech Deicing Technology.

DISCLAIMER

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, GENERAL ATOMICS INTERNATIONAL SERVICES CORPORATION dba Cryotech Deicing Technology makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. GENERAL ATOMICS INTERNATIONAL SERVICES CORPORATION dba Cryotech Deicing Technology assumes no responsibility for any injury or loss resulting from the use of the product described herein. User should satisfy himself that he has all current data relevant to his particular use.

End of Safety Data Sheet