



# Sodium Formate Solid Runway Deicer

## Safety Data Sheet

According to Federal Register / Vol. 77 No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Date of Issue: 10/01/2018

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND COMPANY

#### 1.1 Product Identifier

Chemical Name : Formic acid, sodium salt  
Chemical Formula : HCOONa  
Product Name(s) : Sodium formate, SF, Sodium formate solid runway deicer

#### 1.2: Recommended Use of Chemical and Restrictions on Use

Use of the substance/mixture : Deicing solid, anti-icing solid. Use on runways, taxiways, and airside pavement.  
: Complies with Specification AMS 1431 current version.

#### 1.3: Manufacturer / Details of Supplier of the Safety Data Sheet

ChemForce LLC  
2120 S. Reserve St. #317  
Missoula, MT 59801 – USA  
T 406-285-8590  
Email [info@chemforce.us](mailto:info@chemforce.us) Web:<http://chemforce.us/>

#### 1.4 Emergency telephone number

24 Hour Emergency HAZMAT Response : (800) 262-8200; EPA National Response Center (800) 442-9628

### SECTION 2: HAZARD(S) IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### GHS ELEMENTS:

Hazard Classification: Skin Irritation (Category 3).  
Eye Irritation (Category 2B).  
Acute Toxicity – Inhalation (Category 5).  
Pictogram: None Required  
Signal Word: Warning  
Hazard Statements: Causes mild skin irritation.  
Causes eye irritation: May be harmful if inhaled.

##### Precautionary Statements:

Use only outdoors or in a well-ventilated area. Avoid breathing dust. Wash skin thoroughly after handling. Wear protective gloves, clothing, eye and face protection. If swallowed, rinse mouth. Do NOT induce vomiting. If on hair or skin, remove all contaminated clothing and rinse skin with water. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. If in eyes, rinse carefully with water for several minutes. Remove contact lenses, if able and continue rinsing. Immediately call a poison center or doctor/physician. See First Aid instruction for specific treatment. If skin irritation occurs, get medical attention. If eye irritation persists, get medical attention. If you feel unwell, call a poison center or doctor/physician. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

#### 2.2 Potential Health Effects

Eyes: May cause irritation.  
Skin: May cause irritation.  
Ingestion: May cause irritation.  
Inhalation: May cause irritation. Do not inhale dust.  
Acute Health Hazards: N/A  
Chronic health hazards: N/A  
Medical conditions generally aggravated by exposure: N/A

##### Carcinogenicity:

OSHA: N/A  
ACGIH: N/A  
NTP: N/A  
IARC: N/A  
OTHER: N/A

SECTION 2.2 NOTES: Human health effects of overexposure may cause skin or eye irritation or skin rash, tearing, or blurring of vision.

**3.1. Substance**

Full text of H-phrases: see section 16

**3.2 Mixture**

Sodium Formate (CAS No. 141-53-7) ..... >97% by weight  
Corrosion Inhibitor (Proprietary) ..... <2% by weight

**SECTION 4: FIRST AID MEASURES**

EYES: Flush with water immediately and thoroughly for 15 minutes. If irritation persists, seek medical attention.  
SKIN: May be harmful if absorbed through skin. May cause skin irritation. Wash thoroughly with soap and water. If irritation persists, seek medical attention.  
INGESTION: No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult a physician if necessary.  
INHALATION: May be harmful if inhaled. May cause respiratory tract irritation. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Notes to physicians or first aid providers: N/A

**SECTION 5: FIRE-FIGHTING MEASURES**

Flammability: Not flammable.  
Flammable limits in air, (% by vol.): Upper: N/A  
Lower: N/A  
Flash point: >200°F (93°C)  
Method Used: Tagged closed cup.  
Auto-ignition temperature: N/A  
NFPA Hazard Classification  
Health: 1  
Flammability: 0  
Reactivity: 0  
Other: 0  
HMIS Hazard Classification  
Health: 1  
Flammability: 0  
Reactivity: 0  
Protection: B  
Extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
Special firefighting procedures: Use self-contained breathing apparatus and full protective clothing.  
Unusual fire and explosion hazards: None.  
Hazardous decomposition products: Carbon oxides, Sodium/sodium oxides

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

Accidental release measures: Before handling any spills, always observe the safety precautions described in Section 8. Spills can be removed in the dry form with suitable equipment or flushed away with large quantities of water.

**SECTION 7: HANDLING AND STORAGE**

Handling and storage: Hygroscopic. Store in a cool dry, well-ventilated area in tightly closed containers. Keep away from acids.  
Other precautions: N/A

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

Engineering controls: Keep container tightly closed and protect from moisture. Use ventilation that is adequate to keep employee exposure to airborne dust limited.  
Ventilation: Use ventilation that is adequate to keep employee exposure to airborne dust limited. A dust mask is recommended when handling large quantities in small confined non-ventilated area.  
Respiratory protection: Respiratory protection is not required under normal circumstances. If material is misted, use appropriate NIOSH approved respirator or self-contained breathing apparatus.  
Eye protection: Coverall Chemical splash goggles and full-face shield.  
Skin protection: Rubber or plastic gloves.  
Work hygienic practices: Always follow good safety and industrial hygienic practices.  
Exposure guidelines: See section 2.

Other protective clothing or accessories: N/A

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Granules, irregular shape
Color:	White to gray
Odor:	Odorless to slight vinegar
Odor threshold:	No data available
Effective temperature:	-2°F
pH (15% soln by weight):	9.0-11.0
Boiling point:	Decomposes before boiling @ 411°C
Melting point:	258°C
Evaporation rate:	N/A
Vapor pressure (mmHg):	N/A
Specific gravity (kg/m <sup>3</sup> ):	900-950
Vapor density (air = 1):	N/A
Bulk density:	55 lbs/ft <sup>3</sup>
Solubility in water:	Soluble (>3.75 lbs. / gal.)
Percent solids by weight:	>97%
Percent volatile:	N/A
Volatile organic compounds (VOC):	N/A
Molecular weight:	174.2

## SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Stable under normal storage and handling conditions.
Stability:	Hygroscopic. Absorbs moisture from the air.
Hazardous reactions:	Under normal conditions, no hazardous reactions will occur.
Conditions to avoid:	Heat, flame and sparks. Moisture will produce clumping.
Materials to avoid:	Strong oxidizing agents – strong acids.
Hazardous decomposition products:	When heated to 250°C the product will decompose to hydrogen and sodium oxalate, then into sodium carbonate. Carbon dioxide and carbon monoxide may form when heated to decomposition.

## SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity:	Oral, mouse: LD50 = 11200 mg/kg, Method: OECD Guideline 401 Inhalation, rat: LC50 = >0.67 mg/L air (dust, rats, 4 hrs.). Dermal, rat: LD50 = >2000 mg/kg bw, Method: OECD Guideline 401
Skin contact:	Redness. Pain; burns.
Eye contact:	Redness. Pain; tearing and impaired vision.
Ingestion:	Nausea. Abdominal cramps, vomiting.
Carcinogenicity:	Oral, rat: NOAEL = 2000 mg/kg bw/day, Method: OECD Guideline 453
Reproduction:	1000 mg/kg bw/day
Mutagenicity:	Ames test: Negative, Method: OECD Guideline 471

## SECTION 12: ECOLOGICAL INFORMATION

Toxicity	
Acute aquatic, fish:	>1000 mg/l, <i>Onchorhynchus mykiss</i> , OECD Guideline 203
Acute aquatic, algae:	1600 mg/l, <i>Skeletonema costatum</i> , ISO 10253
Acute aquatic, Daphnia:	>1070 mg/l, <i>Daphnia Magia</i> , OECD 202
Biological elimination:	>90% (Static test, 7 days) DIN 38 412-L25)
Toxicity to bacteria ECo:	> 10000 (OECD 209, after 3 hours)
Biodegradability:	Readily biodegradable, no ecological hazards. 86% degraded within 28 days, Method: OECD 306
Chemical Oxygen Demand (COD):	0.24-0.29 g O <sub>2</sub> /g
Biological Oxygen Demand (BOD <sub>5</sub> ):	>0.01 O <sub>2</sub> /g
Comment:	Readily biodegradable, no ability for bioaccumulation. Dissolves readily in water. Not considered as PBT/vPvB.

## SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal methods:	Reclaim and reuse as much as possible. Dispose in accordance with all federal, state, and local regulations.
RCRA HAZARD CLASS:	N/A

## SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION:	
Proper shipping name:	Sodium Formate

Hazard class: N/A  
ID number: N/A  
Packing group: N/A  
Label statement: N/A

**WATER TRANSPORTATION:**

Proper shipping name: Sodium Formate  
Hazard class: N/A  
ID number: N/A  
Packing group: N/A  
Label statement: N/A

**AIR TRANSPORTATION:**

Proper shipping name: Sodium Formate  
Hazard class: N/A  
ID number: N/A  
Packing group: N/A  
Label statement: N/A

**SECTION 15: REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS**

TSCA (Toxic Substance Control Act): Yes

CERCLA (Comprehensive Response Compensation and Liability Act): No

SARA TITLE III (Superfund Amendments and Reauthorization Act): N/A

311/312 Hazard categories: N/A

313 Reportable ingredients: N/A

**SECTION 16: OTHER INFORMATION**

PREPARATION INFORMATION: Technical Services

**DISCLAIMER:**

The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. This Safety Data Sheet only contains information relating to safety and does not replace any product information or product specification. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and ChemForce LLC will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

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