ESSENTIAL CHEMISTRY. INNOVATIVE SOLUTIONS.

SAFETY DATA SHEET

Print Date: March 19, 2025

Section 1: Product & Company Information

Product Identifier: **Sodium Formate**

Other Means of Identification
Product Number: 130004

Recommended Use and Restrictions on Use
Recommended Use: For Chemical Use
Restrictions on Use: Not to be used as a pesticide

Manufacturer / Importer / Supplier / Distributor Information

Company Name: CORECHEM Inc.
Address: 4320 Greenway Drive
Knoxville, TN 37918 USA

Information Telephone Number: 1-865-524-4239
Fax Number: 1-865-524-3375
Website: www.corecheminc.com
Contact Person: Regulatory Manager
E-mail: regulatory@corecheminc.com
Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 *(monitored 24 hours/day)*

Section 2: Hazards Identification

GHS Hazard Classification(s)
Not classified as hazardous according to OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)
Not classified.

Health Hazard(s)
Not classified.

Environmental Hazard(s)
Not classified.

Label Elements

Signal Word
No signal word

Hazard Symbol(s)
No symbol

Hazard Statement(s)
Not applicable.

Precautionary Statements

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

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

Response
Not applicable.

Storage
Not applicable.

Disposal
P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

None known.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity [2]	Common Name/Synonym(s)	CAS # [3]	Weight %	Impurity or Stabilizing Additive
Sodium Formate		141-53-7	>97%	None

1. Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
2. Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
3. "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Sodium Formate is a white crystalline solid, which is odorless, or which has a slight odor characteristic of formic acid. May cause irritation to the eyes, skin and mucous membranes of the upper respiratory tract. Sodium Formate is deliquescent and will absorb moisture from the air. Sodium Formate is not combustible, however as an organic solid, dusts of this product may create an explosion hazard in the presence of a source of ignition. Use extinguishing media appropriate for surrounding fire. Thermal decomposition of this product produces irritation vapors and toxic gases. (e.g. carbon dioxide, carbon monoxide and sodium oxides.) Emergency responders should wear proper personal protective equipment for the releases to which they are responding. Caution! **MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR. (DURING PROCESSING)** may cause eye irritation. May cause respiratory and digestive tract irritation. Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Keep container tightly closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.

Inhalation

Remove source of contamination or move victim to fresh air. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Get immediate medical attention.

Skin Contact

Remove all contaminated clothing. For skin contact, wash thoroughly with soap and water for at least 20 minutes. Seek immediate medical attention if irritation develops or persists.

Eye Contact

In case of contact with eyes, rinse immediately with plenty of water for at least 20 minutes. Seek immediate medical attention.

Ingestion

Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Immediately give large amounts of water. If vomiting occurs naturally, rinse mouth and repeat administration of water. Obtain medical advice immediately. Never give anything by mouth to a victim who is unconscious or having convulsions.

Most important symptoms/effects, acute and delayed

Symptoms

No data available.

Indication of immediate medical attention and special treatment needed

Hazards

Caution! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING) May cause eye irritation. May cause respiratory and digestive tract irritation. Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Keep container tightly closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.

Treatment

Provide general supportive measures and treat symptomatically.

Section 5: Fire-Fighting Measures

General Fire Hazards

Under certain conditions, airborne dusts of sodium Formate can explode when ignited by a spark, flame or other ignition source. The minimum explosion concentration or airborne dust has been found to be greater than 1500 g/m^3 the minimum explosion ignition temperature for dusts of sodium Formate is 550°C (1022 °F). Wen involved in a fire, this material may decompose and produce irritating vapors, acrid smoke and toxic gases. Refer to NFPA 654, standard for the prevention of fire and dust explosions from the manufacturing, processing, and handling of combustible particulate solids, for comprehensive guidance.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Use any media suitable for the surrounding fire. Regular dry chemical, carbon dioxide, water and regular foam.

Unsuitable Extinguishing Media

No data available.

Specific Hazards Arising from the Chemical

Carbon monoxide, carbon dioxide and sodium oxides. When heated above 253 °C (487.4 °F) Sodium Formate can decompose to form flammable hydrogen gas.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Firefighters should wear full protective clothing including self-contained breathing apparatus. If possible, control runoff from fire control or dilution water to prevent environmental contamination.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Stop the flow of material, if this can be done without risk. Contain the discharged material. If sweeping of a contaminated area is necessary use a dust suppressant agent, which does not react with the product. (see section 10 for incompatibility information.) Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill are to prevent people from entering. In case of large spills, follow all facility emergency response procedures. Small releases can be cleaned up wearing gloves, goggles and suitable body protection. If a vacuum is used for spill clean-up, only an explosion-proof vacuum should be used, due to the potential for dust explosion. Remove soiled clothing and launder before reuse. Avoid all skin contact with the spilled material. Have emergency equipment readily available.

Methods and Materials for Containment and Clean-Up

Small releases can be cleaned-up wearing gloves, goggles, and suitable body protection. In case of a large spill (in which excessive dusts can be generated), clear the affected area, protect people, and respond with trained personnel. If a vacuum is used for spill cleanup, only an explosion proof vacuum should be used, due to the potential for dust explosion. Do not allow the spilled product to enter public drainage systems or open water courses. Place all spill residues in an appropriate container and seal. Thoroughly wash the area after the spill or leak cleanup. Prevent spill from contamination of storm drains, sewers, soil, or groundwater. Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering. In case of large spills, follow all facility emergency response procedures.

Notification Procedures

No data Available

Environmental Precautions

Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Section 7: Handling and Storage

Precautions for Safe Handling

All employees who handle this material should be trained to handle it safely. Do not breathe dust. Avoid all contact with skin and eyes. Avoid accumulation of dusts and this product. Areas in which this compound is used should be wiped down periodically so that this substance is not allowed to accumulate. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions such as electrical grounding and bonding, or inert atmospheres. Use this product only with adequate ventilation. Wash thoroughly after handling. Sodium Formate is deliquescent and will absorb moisture from the air to form wet solid or solution.

Conditions for Safe Storage, including any Incompatibilities

Keep container tightly closed when not in use. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or diked area as appropriate. Store containers away from incompatible materials. (See section 10, Stability and reactivity.) Storage areas should be made of fire-resistant materials. Post warning "NO SMOKING" signs in storage and use areas, as appropriate. Refer to NFPA 654, *prevention of fire and dust explosions from the manufacturing, processing and handling of combustible particulate solids* for additional information on storage. Containers of this material should be separated from oxygen or other oxidizers., by a minimum distance of 20 ft. or by a barrier of noncombustible at least 5 ft. high. Having a fire resistance rating of at least 0.5 hours. Additional information can be found in the OSHA Safety and Health information bulletin. Combustible dust in industry: Preventing and mitigating the effects of fire and explosions. Use only appropriately classified electrical equipment and powered industrial trucks. Use corrosion- resistant structural materials, lighting, and ventilation systems in the storage area. Floors should be sealed to prevent absorption of this material. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged. Have appropriate extinguishing equipment in the storage area (i.e. sprinkler system, portable fire extinguishers) Empty containers may contain residual particulates; therefore, empty containers should be handled with care. Do not cut, grind, weld, or drill near this material. Never store food, feed, or drinking water in containers that held this product. Keep this material away from food, drink, and animal feed. Do not store this material in open or unlabeled containers. Limit quantity of material stored.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Chemical Name	Type	Value	Agency
Particulates Not Otherwise Classified	TWA	10 mg/m3 (inhalable fraction)	ACGIH
Particulates Not Otherwise Classified	TWA	3 mg/m3 (respirable fraction)	ACGIH
Particulates Not Otherwise Classified	TWA	15 mg/m3 (total dust)	OSHA
Particulates Not Otherwise Classified	TWA	5 mg/m3 (respirable fraction)	OSHA
Particulates Not Otherwise Classified	TWA	4 mg/m3 (inhalable fraction)	DFG MAKs
Particulates Not Otherwise Classified	TWA	1.5 mg/m3 (respirable fraction)	DFG MAKs

Occupational Exposure Limits

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

Use engineering methods to control hazardous conditions. This includes exhaust ventilation directly to the outside and using a corrosion-resistant ventilation system separate from other exhaust ventilation systems.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Wear chemical safety goggles. If necessary, refer to U.S. OSHA 29 CFR 1910.133

Skin Protection

Hand Protection

Use impervious gloves. Gloves should be tested to determine their suitability for prolonged contact with this material. If necessary, refer to U.S. OSHA 29 CFR 1910.138.

Other

Wear appropriate chemical resistant clothing. Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

Respiratory Protection

None required where adequate Ventilation conditions exist. If airborne concentrations are high, use an appropriate respirator or dusk mask. If airborne concentrations are above the applicable exposure limits. Use NIOSH-approved respiratory protection. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA standard (29 CFR 1910.134) applicable U.S. State regulations. Oxygen levels below 19.5% are considered IDLH by OSHA. in such atmospheres use of a full facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's respiratory Protection Standard. (1910.14)

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:

Physical State:	Crystalline powder
Color:	White
Odor:	Odorless
Odor Threshold:	No data available.
pH:	7.0-8.5 (1M Solution, 20°C)
Melting Point/Freezing Point:	253°C / 487°F
Initial Boiling Point and Boiling Range:	Not applicable

Flash Point:	Not applicable.
Evaporation Rate (butyl acetate=1)**:**	No data available.
Flammability (solid, gas):	No data available.
Upper/Lower Limit on Flammability or Explosive Limits	
Flammability Limit – Upper:	Not applicable.
Flammability Limit – Lower:	Not applicable.
Explosive Limit – Upper:	Not applicable.
Explosive Limit – Lower:	Not applicable.
Vapor Pressure:	Zero
Vapor Density (air =1)**:**	No data available.
Relative Density (water=1)**:**	1.92 @ 20 °C
Solubility(ies):	
Solubility in water:	77 g/100 mL
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-Ignition Temperature:	Not applicable.
Decomposition Temperature:	253 °C (487 °F)
Viscosity:	No data available.

Other Information:

Molecular Weight:	No data available.
Formula:	CHO2Na

Section 10: Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Product is normally stable in solid form. Sodium Formate is deliquescent; on exposure to air It will absorb water. Forms highly flammable hydrogen gas at temperatures above 253 deg C.

Possibility of Hazardous Reactions

Avoid conditions of heat, flames, sparks, and other sources of ignition. Protect from moisture.

Conditions to Avoid

Avoid conditions of heat, flames, sparks, and other sources of ignitions. Protect from moisture.

Incompatible Materials

This material is incompatible with strong oxidizers, there is a risk of fire. Sodium Formate may react vigorously with strong acids and will decompose to produce formic acid.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and oxides of sodium. When heated above 253 °C (487.4 °F) Sodium Formate decomposes to form sodium oxalate and hydrogen and then into sodium Carbonate.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: Ingestion of this product (especially in large volumes) can irritate the tissues of the mouth, esophagus and other tissues of the digestive system. Symptoms of exposure can include vomiting, diarrhea, and nausea.

Inhalation: Breathing dusts or particulates generated by this product can lead to irritation of the nose, throat or respiratory system. Symptoms of such exposure could include coughing, sneezing, and chest discomfort.

Skin Contact: This product can cause irritation of the skin especially after prolonged exposure. Repeated skin contact may lead to dermatitis (red cracked skin)

Eye Contact: Exposure to particulates or solution of this product may cause irritation of the eyes with symptoms such as stinging, tearing, redness and pain.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Sodium Formate: LD50 (rat) = > 5000 mg/kg
Sodium Formate: LD50 (mouse) = 2500 mg/kg
Sodium Formate: LD50 (dog, adult) = 4000 mg/kg

Dermal

No Data Available

Inhalation

No Data Available

Repeated Dose Toxicity

No Data Available

Skin Corrosion/Irritation

This product can cause irritation of the skin especially after prolonged exposure. Repeated skin contact may lead to dermatitis (red cracked skin)

Serious Eye Damage/Eye Irritation

Exposure to particulates or solution of this product may cause irritation of the eyes with symptoms such as stinging, tearing, redness and pain.

Respiratory/Skin Sensitization

This product can cause irritation of the skin especially after prolonged exposure. Repeated skin contact may lead to dermatitis (red cracked skin)

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

US. National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

None known.

Specific Target Organ Toxicity – Single Exposure

None known.

Specific Target Organ Toxicity – Repeated Exposure

Prolonged skin contact may cause dermatitis.

Aspiration Hazard

Not classified.

Other Effects

None known.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

Sodium Formate: LD50 954 mg/L (96h)

Aquatic Invertebrates

Sodium Formate: EC50 (Daphnia) = 790 mg/L (48h)

Toxicity to Aquatic Plants

Sodium Formate: LC50 = 790 mg/L (96h)

Chronic Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability

Biodegradation

There are no data on the degradability of this product.

BOD/COD Ratio

No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

No data available.

Mobility in Soil

The product is water soluble and may spread in water systems.

Other Adverse Effects

No data available.

Section 13: Disposal Considerations

Disposal Instructions

All wastes must be handled in accordance with local, state, and federal regulations or with. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

Section 14: Transportation Information

US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard:	No
Sudden Release of Pressure:	No
Reactive:	No
Acute (Immediate) Health Hazard:	Yes
Chronic (Delayed) Health Hazard:	No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 1
Chronic Health Hazard: /
Flammability: 1
Physical Hazard: 0
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA) Rating

Health Hazard: 1
Fire Hazard: 1
Reactivity Hazard: 0
Special: N/A
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

Prepared By:	Regulatory Manager
Version #:	001
Issue Date:	07/07/15
Last Revised By:	Regulatory Assistant C
Last Revision Date:	8/21/2021
Current Revision:	02
Sections Revised:	2, 5-6, 8-9, 11-12, 16

Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL – Immediately Dangerous to Life and Health
Kg – Kilogram
l – Liter
lb – Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml – milliliter
N/A – Not Applicable
N/D – Not Determined
PEL – Permissible Exposure Limit
REL – Recommended Exposure Limit
STEL – Short-term Exposure Limit
TWA - Time weighted average
ACGIH - American Conference of Industrial Hygienists
AIHA – American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS – Chemical Abstracts Service
DOT – US Department of Transportation
EPA – US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OSHA – US Occupational Health and Safety Administration
SARA – US EPA Superfund Amendments and Reauthorization Act
TSCA – US EPA Toxic Substances Control Act
UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

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