

Sodium formate

Version number: 1.0

SECTION 1: Identification

1.1 Product identifier

Identification of the substance	sodium formate
Trade name	<u>Sodium formate</u>
CAS number	141-53-7

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

Relevant identified uses	Chemicals for various applications
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1.3 Details of the supplier of the safety data sheet

Valudor Products, LLC	Telephone: +1 (760) 635 8500
179 Calle Magdalena Suite 100	e-mail: info@valudor.com
Encinitas, California CA 92024	Website: www.valudor.com
United States	

1.4 Emergency telephone number

As above or nearest toxicological information centre.

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

This substance does not meet the criteria for classification.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Not required.

2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Sodium formate

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	sodium formate
Identifiers	
CAS No	141-53-7
Molecular formula	C H Na O ₂
Molar mass	68.01 g/mol
Purity	>97%

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Self-protection of the first aider.

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

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.

Following ingestion

Rinse mouth immediately and drink plenty of water.

Get medical advice/attention if you feel unwell.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed

None.

Sodium formate

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

non-combustible, coordinate firefighting measures to the fire surroundings

Unsuitable extinguishing media

none

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Hazardous combustion products

carbon monoxide (CO), carbon dioxide (CO₂), metal oxide smoke

5.3 Advice for firefighters

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Coordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

wear self-contained breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ventilate affected area.

Avoid contact with skin and eyes.

Do not breathe dust.

Control of dust.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Take up mechanically.

Sodium formate

Advice on how to clean up a spill

Collect spillage.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Removal of dust deposits.

Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

Handling of incompatible substances or mixtures

Do not mix with acids.

Do not mix with oxidizer

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Remove contaminated clothing and protective equipment before entering eating areas.

Do not breathe dust.

Avoid contact with skin and eyes.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

7.2 Conditions for safe storage, including any incompatibilities

Explosive atmospheres

Removal of dust deposits.

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Sodium formate

Protect against external exposure, such as

heat, humidity

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Keep container tightly closed and in a well-ventilated place.

Keep container dry.

Keep in a cool place.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

No constituent of the product currently has a known exposure limit.

8.2 Exposure controls

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection. (EN 166).

Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
NBR: acrylonitrile-butadiene rubber	≥ 0,35 mm	>480 minutes (permeation: level 6)
FKM: fluoro-elastomer	≥ 0,4 mm	>480 minutes (permeation: level 6)
IIR: isobutene-isoprene (butyl) rubber	≥ 0,5 mm	>480 minutes (permeation: level 6)

Sodium formate

With prolonged and intense use of the product it is recommended to use hand protection. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Body protection

Protective clothing for use against solid particulates.

Respiratory protection

Particulate filter device (EN 143).

Adequate particulate filter (EN 143).

P2 (filters at least 94 % of airborne particles, color code: White).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	solid (powder, crystalline)
Color	white
Odor	characteristic
Odor threshold	not determined
Other safety parameters	
pH (value)	~7.6 (in aqueous solution: 10 ^{g/l})
Melting point/freezing point	~292 °C
Boiling point or initial boiling point and boiling range	~392 °C (calculated)
Flash point	not applicable
Evaporation rate	not applicable
Flammability (solid, gas)	non-combustible
Explosive limits	not determined
Explosion limits of dust clouds	not applicable
Vapor pressure	not determined

Sodium formate

Density	1.8 g/cm ³ at 20 °C
Relative density	not applicable
Relative vapour density	not applicable
Solubility(ies)	
Water solubility	>1,000 g/l at 20 °C, soluble
Partition coefficient	
n-octanol/water (log KOW)	-1.9 (pH value: 5, 23 °C)
Soil organic carbon/water (log KOC)	1.49
Auto-ignition temperature	not determined
Decomposition temperature	681 K
Viscosity	not relevant (solid)
Explosive properties	none
Oxidizing properties	none
Information for relevant hazard classes according to GHS	hazard classes acc. to GHS (physical hazards): not relevant
9.2 Other information	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Protect from moisture.

10.5 Incompatible materials

acids, strong oxidizer

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

Sodium formate

SECTION 11: Toxicological information

11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgment (weight of evidence determination).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

This substance does not meet the criteria for classification.

Acute toxicity

Shall not be classified as acutely toxic (dermal).

Shall not be classified as acutely toxic (inhalation).

May be harmful if swallowed.

Exposure route	Endpoint	Value	Species	Method
dermal	LD50	>2,000 mg/kg	rat	OECD Guideline 402

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

(ECHA, OECD Guideline 404)

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

(ECHA, OECD Guideline 405)

Respiratory or skin sensitization

Skin sensitization

Shall not be classified as a skin sensitizer.

(ECHA, OECD Guideline 406)

Respiratory sensitization

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

(ECHA, OECD Guideline 477)

Carcinogenicity

IARC Monographs

not listed

National Toxicology Program (United States)

not listed

OSHA Carcinogens

Not listed.

Sodium formate

Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Chronic toxicity				
Exposure route	Endpoint	Value	Species	Method
oral	NOAEL	3,000 mg/kg bw/day	rat	OECD Guideline 408

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Other information

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

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

Endpoint	Exposure time	Value	Species	Method
LC50	96 h	>1,000 mg/l	rainbow trout (<i>Oncorhynchus mykiss</i>)	EPA OTS 797.1400
EC50	48 h	>1,000 mg/l	daphnia magna	EPA-660/3-75-009
EC50	72 h	570 mg/l	algae (<i>pseudokirchneriella subcapitata</i>)	-
ErC50	72 h	>1,000 mg/l	algae (<i>pseudokirchneriella subcapitata</i>)	-

Aquatic toxicity (chronic)

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

Sodium formate

Endpoint	Exposure time	Value	Species	Method
NOEC	72 h	63 mg/l	algae (pseudokirchneriella subcapitata)	-
NOEC	21 d	≥100 mg/l	daphnia magna	OECD Guideline 211
LOEC	21 d	>100 mg/l	daphnia magna	OECD Guideline 211

12.2 Persistence and degradability

Biodegradation

The substance is readily biodegradable.

Process of degradability			
Process	Degradation rate	Time	Method
oxygen depletion	86 %	28 d	OECD Guideline 306

Persistence

No data available.

12.3 Bioaccumulative potential

n-octanol/water (log KOW) -1.9 (pH value: 5, 23 °C)

12.4 Mobility in soil

The Organic Carbon normalised adsorption coefficient 1.49

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Endocrine disrupting properties Other adverse effects

Not listed.

Remarks

None.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packages

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

Sodium formate

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	UN number	not assigned
14.2	UN proper shipping name	-
14.3	Transport hazard class(es)	-
14.4	Packing group	-
14.5	Environmental hazards	-
14.6	Special precautions for user	-
14.7	Transport in bulk according to IMO instruments	-

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT) Additional information

Not subject to transport regulations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) Substance is listed as "ACTIVE"

Superfund Amendment and Reauthorization Act (SARA TITLE III)

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

Not listed

Specific Toxic Chemical Listings (EPCRA Section 313)

Not listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Not listed

Clean Air Act

Not listed

Right to Know Hazardous Substance List

Sodium formate

Cleaning Product Right to Know Act Substance List (CA-RTK)

Not listed

Toxic or Hazardous Substance List (MA-TURA)

Not listed

Hazardous Substances List (MN-ERTK)

Not listed

Hazardous Substance List (NJ-RTK)

Not listed

Hazardous Substance List (Chapter 323) (PA-RTK)

Not listed

Hazardous Substance List (RI-RTK)

Not listed

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Not listed

Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

Not listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System.
American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	0	no significant risk to health
Flammability	0	material that will not burn under typical fire conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	-

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Sodium formate

Category	Degree of hazard	Description
Flammability	0	material that will not burn under typical fire conditions
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard	-	-

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information, including date of preparation or last revision

Date of preparation: 2023-03-28

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC	International Agency for Research on Cancer
IARC Monographs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LOEC	Lowest Observed Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration

Sodium formate

Abbr.	Descriptions of used abbreviations
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

Responsible for the safety data sheet

Chemical Regulatory Compliance Company Telephone: +1 (630) 410-1660
Jasper, GA e-Mail: GHS@crc-us.com
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Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.