

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Chemical formula: HCOONa
Chemical structure: $\begin{array}{c} \text{H}-\text{C}-\text{O}-\text{Na} \\ || \\ \text{O} \end{array}$

Common name: sodium formate
Common synonyms: Formic acid, sodium salt
IUPAC systematic name: sodium formic
CAS registry number: 141-53-7
Relative molecular mass: 68.01

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS#	Range % by Wt.
sodium formic	141-53-7	94-100

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: Causes irritation, redness, and pain.

SKIN CONTACT: Causes irritation to skin. Symptoms include redness, itching, and pain.

INHALATION: Inhalation of dust can irritate the respiratory tract with symptoms of sore throat, coughing, and shortness of breath.

INGESTION: Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

CHRONIC EXPOSURE: No information found.

AGGRAVATION OF PRE-EXISTING CONDITIONS: No information found.

SECTION 4: FIRST AID MEASURES

EYE: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

SKIN: Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

INGESTION: Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

SECTION 7: HANDLING AND STORAGE

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits: None established.

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved): For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Maintain eye wash fountain and quick-drench facilities in work area. Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible.

SECTION 9: CHEMICAL AND PHYSICAL PROPERTIES

Appearance: White, deliquescent, granules or crystalline powder.

Odor: Odorless to slight formic acid odor.

Solubility: 97 g/100 g water @ 20C (68F)

Density: 1.92 @ 20C

pH: 7.0-8.5, conc: 1M at 20 C (solution)

% Volatiles by volume @ 21C (70F): 0.5

Boiling Point: Decomposes.

Melting Point: 253C (487F)

Vapor Density (Air=1): No information found.

Vapor Pressure (mm Hg): No information found.

Evaporation Rate (BuAc=1): No information found.

SECTION 10: STABILITY AND REACTIVITY

Stability: Hygroscopic. Readily absorbs moisture from the air. Solutions are strong bases.

Hazardous Decomposition Products: At higher temperatures, substance decomposes into sodium oxalate and hydrogen, then into sodium carbonate. Carbon dioxide and carbon monoxide may form



when heated to decomposition.

Hazardous Polymerization: This substance does not polymerize.

Incompatibilities: Reacts with strong acids to form formic acid fumes.

Conditions to Avoid: No information found.

SECTION 11: TOXICOLOGICAL INFORMATION

Oral LD50 Mouse:11200 mg/kg

-----\Cancer Lists\-----

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Sodium Formate(147-53-7)	No	No	None

SECTION 12: ECOLOGICAL INFORMATION

Environmental Fate: No information found.

Environmental Toxicity: No information found.

SECTION 13: DISPOSAL INFORMATION

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14: TRANSPORTATION INFORMATION

IT'S NOT RESTRICTED BY IMDG. NORMAL GOODS

SECTION 15: REGULATORY INFORMATION

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Sodium Formate (141-53-7)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----

Ingredient	Korea	--Canada--		
		DSL	NDSL	Phil.
Sodium Formate (141-53-7)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----

Ingredient	-SARA 302-		-----SARA 313-----	
	RQ	TPQ	List	Chemical Catg.
Sodium Formate (141-53-7)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----

Ingredient	CERCLA	-RCRA-	-TSCA-
		261.33	8(d)
Sodium Formate (141-53-7)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No

Reactivity: No (Pure / Solid)

SECTION 16: OTHER INFORMATION

NFPA Ratings: Health: 2 Flammability: 0 Reactivity: 0

Label Hazard Warning: WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

Label Precautions: Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Avoid breathing dust.

Keep container closed.

Use only with adequate ventilation.

Label First Aid: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In all cases, get medical attention.

This MSDS is validity until :12-31-2015

