

# POTASSIUM FORMATE

## 40-75% - SAFETY DATA SHEET

### SECTION 1 - Product and Company Identification

**Trade Name:** Potassium Formate 40-75%  
**Synonyms:** Formic acid, potassium salt  
**Product Codes:** I000044, I000090, I000105, I000112, I000113  
**Chemical Name:** Potassium Formate  
**Chemical Family:** Potassium salt  
**Molecular Formula:**  $\text{CHKO}_2$

**Manufacturer's Name and Address:**  
Themark Corporation  
5455 Hidalgo Street • Houston, 77056

**Emergency Tel. #:**  
Chemtrec (800) 424-9300 (Within Continental U.S.).  
Chemtrec (703) 527-3887 (Outside Continental U.S.).

### SECTION 2 - Hazards Identification

**EMERGENCY OVERVIEW:** May cause eye irritation.

**ROUTES OF ENTRY:** Inhalation, Ingestion, Eye contact, Skin contact.

**POTENTIAL HEALTH EFFECTS:**

**EYES:** May cause irritation  
**SKIN:** May cause irritation  
**INGESTION:** May cause irritation  
**INHALATION:** May cause irritation

**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 NOTES:** This material is hazardous as defined by the American OSHA Hazard Communication Standard (29 CFR 1910.1200).

### SECTION 3 - Composition/Information on Ingredients

|                                      | <u>Concentration</u> | <u>OSHA Status</u> |
|--------------------------------------|----------------------|--------------------|
| <b>INGREDIENT:</b> Potassium Formate | 40-75%               | Hazardous          |

**CAS NO.:** 590-29-4

**SARA 313 REPORTABLE:** N/A

**OSHA PEL-TWA:** N/A  
**OSHA PEL STEL:** N/A  
**OSHA PEL CEILING:** N/A  
**ACGIH TLV-TWA:** N/A  
**ACGIH TLV STEL:** N/A  
**ACGIH TLV CEILING:** N/A

### SECTION 4 - First Aid Measures

**EYES:** Flush with water, also under the eyelids, immediately and thoroughly for 15 minutes. Remove contact lenses. Immediate medical attention is required.

**SKIN:** Wash off immediately with soap and water. When symptoms persist or in all cases of doubt seek medical advice.

**INGESTION:** Call a physician immediately. Do not induce vomiting without medical advice.

**INHALATION:** Keep at rest. Aerate with fresh air. When symptoms persist or in all cases of doubt seek medical advice.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** Treat symptomatically.

**SECTION 4 NOTES:** Remove contaminated, soaked clothing immediately and dispose of safely. First aide responder needs to protect himself.



**THEMARK CORPORATION**  
THE MARK OF EXCELLENCE

Phone: 412-551-9893 • info@themarkcorp.com  
themarkcorp.com

## SECTION 5 - Health Hazard Information

---

**FLAMMABLE LIMITS IN AIR: UPPER:** N/A  
**(% BY VOLUME) LOWER:** N/A

**FLASH POINT:** Not determined.  
**F°:** N/A  
**C°:** N/A

**METHOD USED:** N/A

**AUTO-IGNITION TEMPERATURE:**  
**F°:** >750  
**C°:** >100

**NFPA HAZARD CLASSIFICATION:**

**HEALTH:** 1  
**FLAMMABILITY:** 1  
**REACTIVITY:** 0  
**OTHER:** None

**HMIS HAZARD CLASSIFICATION:**

**HEALTH:** 1  
**FLAMMABILITY:** 1  
**REACTIVITY:** 0  
**PERSONAL PROTECTION LEVEL:** D

**EXTINGUISHING MEDIA:** Foam, dry chemical, carbon dioxide (CO<sub>2</sub>), water spray. Do not use a solid water stream as it may scatter and spread fire.

**SPECIAL FIRE FIGHTING PROCEDURES:** Fire fighter protection should include a self-contained breathing apparatus (NIOSH approved or EN 133) and full fire-fighting turn-out gear.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** OSHA Flammability classification: Combustible liquid Class III B

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous gases produced may consist of: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>).

**SECTION 5 NOTES:** Cool containers/ tanks with water spray. Dike and collect water used to fight fire. Keep people away from and upwind of fire.

## SECTION 6 - Accidental Release Measures

---

**ACCIDENTAL RELEASE MEASURES:** Stop the flow of material, if possible without risk. Dike spilled material, where this is possible. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Dispose of in accordance with local, state and federal regulations. Take necessary action to avoid static electric discharge (which might cause ignition of organic vapors).

**SECTION 6 NOTES:** Do not discharge product into the aquatic environment without pretreatment (biological treatment plant).

## SECTION 7 - Handling and Storage

---

**HANDLING AND STORAGE:** Avoid contact with skin, eyes and clothing. Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Keep away from sources of ignition- No Smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

**OTHER PRECAUTIONS:** In case of fire, emergency cooling with water spray should be available. Ground and bond containers when transferring material.

**SECTION 7 NOTES:** Always use good safety and industrial hygienic practices.

## SECTION 8 - Special Protection Information

---

**ENGINEERING CONTROLS:** General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts) should be used for mechanical ventilation.

**VENTILATION:** Local ventilation is usually preferred. Explosion-proof mechanical ventilation is advised when local ventilation is inadequate.

**RESPIRATORY PROTECTION:** Respirator with filter for organic vapor. Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release. Equipment should conform to NIOSH regulations.

**EYE PROTECTION:** Chemical splash goggles and full-face shield.

**SKIN PROTECTION:** Rubber gloves.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Impervious clothing to prevent skin contact.

**WORK HYGIENIC PRACTICES:** Always use good safety and industrial hygienic practices.

**EXPOSURE GUIDELINES:** No exposure limits established.

## SECTION 9 - Physical and Chemical Properties

---

**APPEARANCE:** Clear, nearly colorless liquid.

**ODOR:** Odorless to slight sweet odor.

**PHYSICAL STATE:** Liquid.

**pH (neat):** 8 - 11

**BOILING POINT:** F°: 230-280  
C°: 110-138

**CRYSTALLIZATION POINT:** F°: -67 to 41  
C°: -55 to 5

**VAPOR PRESSURE (mmHg):** Not determined.

**VAPOR DENSITY (AIR = 1):** Not determined.

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** 1.26-1.57

**DENSITY, LBS/GAL:** 10.5-13.2

**EVAPORATION RATE:** N/A

**SOLUBILITY IN WATER:** Miscible in all proportions.

**PERCENT SOLIDS w/w%:** 40-75

**VOLATILE ORGANIC COMPOUNDS (VOC):** None

**MOLECULAR WEIGHT:** 84.12

**VISCOSITY centipoise (cP) @ 20°C:**

40% = 2.1 cP

50% = 3.1 cP

60% = 5.2 cP

75% = 19.1 cP

## SECTION 10 - Stability and Reactivity

**STABILITY:** Stable under recommended storage conditions.  
x

**CONDITIONS TO AVOID (STABILITY):** Avoid contact with heat, sparks, open flame, and static discharge. Avoid any source of ignition.

**INCOMPATIBILITY (MATERIAL TO AVOID):** N/A

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** No decomposition if stored and applied as directed.

**HAZARDOUS POLYMERIZATION:** N/A

**CONDITIONS TO AVOID (POLYMERIZATION):** N/A

## SECTION 11 - Toxicological Information

**TOXICOLOGICAL INFORMATION:** Potassium Formate  
(CAS# 590-29-4)

**LD50 (Oral, mouse):** 5500 mg/kg

**LD50 (Dermal, rat):** >2000 mg/kg

**LC50 (Inhalation, rat):** >0.67 mg/l (4hr)

**Irritation and corrosion:** Eyes (rabbit): No eye irritation  
Skin (rabbit): No skin irritation

**SECTION 11 NOTES:** Handle in accordance with good industrial hygiene and safety practice

## SECTION 12 - Ecological Information

**ECOLOGICAL INFORMATION:** Avoid release to the environment.

**LC<sub>50</sub> (Oncorhynchus mykiss, 96 hr):** > 1000 mg/l

**LC<sub>50</sub> (Pimephales promelas, (fathead minnow), 96 hr):**  
> 1000 mg/l

**EC<sub>50</sub> Water flea (Daphnia magna), 48 hr:** > 1000 mg/l

**EC<sub>50</sub> (Pseudokirchneriella subcapitata), 72 hr:** > 1000 mg/l  
(growth rate)

**SECTION 12 NOTES:** This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB).

## SECTION 13 - Disposal Considerations

**WASTE DISPOSAL METHOD:** Disposal required in compliance with all waste management related local, state and federal regulations. The choice of the appropriate method of disposal depends on the product composition by the time of disposal as well as the local statutes and possibilities for disposal. Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

**RCRA HAZARD CLASS:** N/A

## SECTION 14 - Transportation Information

**U.S. DEPARTMENT OF TRANSPORTATION:** D.O.T (49 CFR) Not restricted

**PROPER SHIPPING NAME:** Potassium Formate, Solution

**HAZARD CLASS:** N/A

**ID NUMBER:** N/A

**PACKING GROUP:** N/A

**LABEL STATEMENT:** WARNING!

**WATER TRANSPORTATION (IMDG):**

**PROPER SHIPPING NAME:** Potassium Formate, Solution

**HAZARD CLASS:** N/A

**ID NUMBER:** N/A

**PACKING GROUP:** N/A

**LABEL STATEMENT:** WARNING!

**AIR TRANSPORTATION (IATA):**

**PROPER SHIPPING NAME:** Potassium Formate, Solution

**HAZARD CLASS:** N/A

**ID NUMBER:** N/A

**PACKING GROUP:** N/A

**LABEL STATEMENTS:** WARNING!

## **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:**

**STATE REGULATIONS:**

**INTERNATIONAL REGULATIONS: Schedule B Code:**  
2915.12.0000

## **SECTION 16 - Other Information**

---

**PREPARATION INFORMATION:** Themark Corporation

**DISCLAIMER:** The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. 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 Themark Corporation 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.