



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 02/05/2020

Reviewed on 02/05/2020

### \* 1 Identification

- **Product Identifier**
- **Trade Name: Potassium Formate**
- **Relevant identified uses of the substance or mixture and uses advised against:**  
De-icer, anti-icer, drilling fluid additive, heat transfer agent, reducing agent, metallization catalyst, and coating additive.
- **Product Description:** Potassium formate
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**  
BioFuran Materials, LLC  
920 William Pitt Way  
Pittsburgh, PA 15238  
412-376-7101
- **Emergency telephone number:**  
The Chief Technology Officer  
412-626-4144

### 2 Hazard(s) Identification

- **Classification of the substance or mixture:**



Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements:**
- **Hazard pictograms:**



- **Signal word:** Warning
- **Hazard statements:**  
H319 Causes serious eye irritation.
- **Precautionary statements:**  
P264 Wash thoroughly after handling.  
P280 Wear eye protection / face protection.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 If eye irritation persists: Get medical advice/attention.
- **Unknown acute toxicity:**  
This value refers to knowledge of known, established toxicological or ecotoxicological values.
- **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
- **NFPA ratings (scale 0 - 4)**

Health = 1  
Fire = 0  
Reactivity = 0



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 02/05/2020

Reviewed on 02/05/2020

### Trade Name: Potassium Formate

#### • HMIS-ratings (scale 0 - 4)

HEALTH	1	Health = 1
FIRE	0	Fire = 0
REACTIVITY	0	Physical Hazard = 0

#### • Hazard(s) not otherwise classified (HNOC): None known

### 3 Composition/Information on Ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with non-hazardous additions.

#### • Dangerous Components:

590-29-4	Potassium Formate	Eye Irrit. 2A, H319	100%
----------	-------------------	---------------------	------

#### • Additional information:

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

### 4 First-Aid Measures

#### • Description of first aid measures

##### • After inhalation:

Supply fresh air; consult doctor in case of complaints.  
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

##### • After skin contact:

Wash with soap and water.  
If skin irritation occurs, consult a doctor.

##### • After eye contact:

Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.  
If easy to do so, remove contact lenses if worn.

##### • After swallowing: If swallowed and symptoms occur, consult a doctor.

##### • Information for doctor

##### • Most important symptoms and effects, both acute and delayed: No further relevant information available.

##### • Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

### 5 Fire-Fighting Measures

#### • Extinguishing media

#### • Suitable extinguishing agents: Use fire fighting measures that suit the environment.

#### • For safety reasons unsuitable extinguishing agents: No further relevant information.

#### • Special hazards arising from the substance or mixture: Carbon oxides, Potassium oxides

#### • Advice for firefighters

#### • Special protective equipment for firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

(Contd. on page 3)



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 02/05/2020

Reviewed on 02/05/2020

**Trade Name: Potassium Formate**

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:**  
Avoid dust formation. Avoid breathing vapours, mist or gas.  
For personal protection see section 8
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.  
Dispose of the collected material according to regulations.
- **Reference to other sections:**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

All components have the value 9 mg/m<sup>3</sup>.

- **PAC-2:**

All components have the value 99 mg/m<sup>3</sup>.

- **PAC-3:**

All components have the value 600 mg/m<sup>3</sup>.

### 7 Handling and Storage

- **Handling**
- **Precautions for safe handling:**  
Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.  
Provide appropriate exhaust ventilation at places where dust is formed.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
No special requirements.  
Keep container tightly closed in a dry and well-ventilated place
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s):** No further relevant information available.

### 8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**
- **Components with occupational exposure limits:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

(Contd. on page 4)



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 02/05/2020

Reviewed on 02/05/2020

**Trade Name: Potassium Formate**

· **Exposure controls:**

· **Personal protective equipment**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing and wash before reuse.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.

· **Protection of hands:**



Protective gloves

Not required.

· **Material of gloves:** Not applicable.

· **Penetration time of glove material:** Not applicable.

· **Eye protection:**



Safety glasses

· **Limitation and supervision of exposure into the environment:** None

### 9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Crystalline

**Color:** White

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/Melting range:** 165-168 °C (329-270.4 °F)

**Boiling point/Boiling range:** Not determined.

· **Flash point:** None

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** Not applicable

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

(Contd. on page 5)



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 02/05/2020

Reviewed on 02/05/2020

### Trade Name: Potassium Formate

- **Explosion limits:**
  - Lower:** Not determined.
  - Upper:** Not determined.
- **Vapor pressure:** Not determined.
- **Density:**
  - Relative density:** Not determined.
  - Vapor density:** Not determined.
  - Evaporation rate:** Not determined.
- **Solubility in / Miscibility with:**
  - Water:** Soluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic:** Not determined.
  - Kinematic:** Not determined.
- **Solvent content:**
  - VOC content:** 0.00 %
  - Solids content:** 0.0 %
- **Other information:** No further relevant information available.

### 10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Product is stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** Strong oxidizing agents
- **Hazardous decomposition products:**  
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Potassium oxides

### 11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**

#### LD/LC50 values that are relevant for classification:

**590-29-4 Potassium Formate**

Oral LD50 5,500 mg/kg (Mouse)

- **Primary irritant effect:**
- **On the skin:** No irritating effect.
- **On the eye:** Irritating effect.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

(Contd. on page 6)



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 02/05/2020

Reviewed on 02/05/2020

**Trade Name: Potassium Formate****· Carcinogenic categories:****· IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

**· NTP (National Toxicology Program):**

None of the ingredients are listed.

**· OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

### 12 Ecological Information

**· Toxicity:****· Aquatic toxicity:** No further relevant information available.**· Persistence and degradability:** No further relevant information available.**· Behavior in environmental systems:****· Bioaccumulative potential:** No further relevant information available.**· Mobility in soil:** No further relevant information available.**· Additional ecological information:****· General notes:**

Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.

**· Results of PBT and vPvB assessment:****· PBT:** Not applicable.**· vPvB:** Not applicable.**· Other adverse effects:** No further relevant information available.

### 13 Disposal Considerations

**· Waste treatment methods****· Recommendation:**

Observe all federal, state and local environmental regulations when disposing of this material.

**· Uncleaned packaging****· Recommendation:** Disposal must be made according to official regulations.

### 14 Transport Information

**· UN-Number:****· DOT, ADR/ADN, IMDG, IATA**

Non-Regulated Material

**· UN proper shipping name:****· DOT, ADR/ADN, IMDG, IATA**

Non-Regulated Material

**· Transport hazard class(es):****· DOT, ADR/ADN, ADN, IMDG, IATA****· Class:**

Non-Regulated Material

**· Packing group:****· DOT, ADR/ADN, IMDG, IATA**

Non-Regulated Material

**· Environmental hazards:**

Not applicable.

**· Special precautions for user:**

Not applicable.

**· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**

Not applicable.

(Contd. on page 7)



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 02/05/2020

Reviewed on 02/05/2020

**Trade Name: Potassium Formate**

- **UN "Model Regulation":** Non-Regulated Material

### 15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

- **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

None of the ingredients are listed.

- **California Proposition 65:**

- **Chemicals known to cause cancer:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

- **New Jersey Right-to-Know List:**

None of the ingredients are listed.

- **New Jersey Special Hazardous Substance List:**

None of the ingredients are listed.

- **Pennsylvania Right-to-Know List:**

None of the ingredients are listed.

- **Pennsylvania Special Hazardous Substance List:**

None of the ingredients are listed.

- **Carcinogenic categories:**

- **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

- **TLV (Threshold Limit Value established by ACGIH):**

None of the ingredients are listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 8)



## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 02/05/2020

Reviewed on 02/05/2020

**Trade Name: Potassium Formate**

• **Hazard pictograms:**



• **Signal word:** Warning

• **Hazard statements:**

H319 Causes serious eye irritation.

• **Precautionary statements:**

P264 Wash thoroughly after handling.

P280 Wear eye protection / face protection.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

• **National regulations:**

None of the ingredients are listed.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

• **Date of last revision/ revision number:** 02/05/2020 / 1

• **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety & Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

• **\* Data compared to the previous version altered.**

SDS created by MSDS Authoring Services [www.msdsauthoring.com](http://www.msdsauthoring.com) +1-877-204-9106