

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**
**1.1. Product identifier**

Product form : Substance  
 Trade name : Provifrost KF ECO  
 Chemical name : Potassium formate  
 EC/EINECS/ELINS : 209-677-9  
 CAS : 590-29-4  
 REACH registration No. : 01-2119486456-26

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

Main use category : Industrial use, Professional use  
 Use of the substance/mixture : De-icing product

Title	Sector of use	Product category	Process category	Article category	Environmental release	SPERC
- De-icing product	SU3, SU8, SU10, SU0	PC4	PROC1, PROC3, PROC7, PROC8a, PROC11		ERC1, ERC2	

Full text of use descriptors: see section 16.

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet**

Proviron Industries N.V.  
 Zone 2 - G. Gilliotstraat 60  
 B-2620 Hemiksem - Belgium  
 T +32 3 870 88 20 - F +32 3 877 23 33  
[info@proviron.com](mailto:info@proviron.com) - [www.proviron.com](http://www.proviron.com)

**1.4. Emergency telephone number**

Emergency number : +32 3 870 88 20 (08:00-16:30 GMT+1)

**SECTION 2: Hazards identification**
**2.1. Classification of the substance or mixture**
**Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]**

Not classified

**Classification according to Directive 67/548/EEC or 1999/45/EC**

Not classified

**Adverse physicochemical, human health and environmental effects**

No additional information available

**2.2. Label elements**
**Labelling according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]**

No labelling required

**2.3. Other hazards**

No additional information available

**SECTION 3: Composition/information on ingredients**
**3.1. Substances**

Substance type : Mono-constituent  
 Name : Provifrost KF ECO  
 CAS : 590-29-4  
 EC/EINECS/ELINS : 209-677-9  
 EC index no :

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Water	(CAS)7732-18-5 (EC/EINECS/ELINS)231-791-2	50	Not classified
Potassium formate	(CAS)590-29-4 (EC/EINECS/ELINS)209-677-9	50	Not classified

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]
Water	(CAS)7732-18-5 (EC/EINECS/ELINS)231-791-2	50	Not classified
Potassium formate	(CAS)590-29-4 (EC/EINECS/ELINS)209-677-9	50	Not classified

Full text of R-, H- and EUH-phrases: see section 16

**3.2. Mixture**

Not applicable

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.  
 First-aid measures after skin contact : Immediately remove any wetted clothing, shoes or stockings. After contact with skin, wash immediately with plenty of water. In all cases of doubt, or when symptoms persist, seek medical advice.  
 First-aid measures after eye contact : In case of contact with eyes, rinse immediately with plenty of flowing water for > 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.  
 First-aid measures after ingestion : Rinse mouth immediately and drink large quantities of water. Get medical advice/attention.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms/injuries after inhalation : Inhalation of vapours in high concentration may cause irritation of respiratory system.  
 Symptoms/injuries after skin contact : Due to its pH-value (see chapter 9), irritation of the skin and eyes cannot be ruled out.  
 Symptoms/injuries after eye contact : Due to its pH-value (see chapter 9), irritation of the skin and eyes cannot be ruled out.  
 Symptoms/injuries after ingestion : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.  
 Chronic symptoms : No data available.

**4.3. Indication of any immediate medical attention and special treatment needed**

No additional information available

**SECTION 5: Firefighting measures**
**5.1. Extinguishing media**

Suitable extinguishing media : Powder. Carbon dioxide (CO<sub>2</sub>). Atomized water. Alcohol resistant foam.  
 Unsuitable extinguishing media : High power water jet.

**5.2. Special hazards arising from the substance or mixture**

No additional information available

**5.3. Advice for firefighters**

Firefighting instructions : Extinguishing measurements should be adjusted to the surrounding area.  
 Protection during firefighting : Wear fire/flame resistant/retardant clothing. In case of fire: Wear self-contained breathing apparatus.  
 Other information : Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures**
**6.1. Personal precautions, protective equipment and emergency procedures**
**6.1.1. For non-emergency personnel**

Protective equipment : See protective measures under point 7 and 8.

**6.1.2. For emergency responders**

Protective equipment : See protective measures under point 7 and 8.

**6.2. Environmental precautions**

Do not empty into drains or the aquatic environment.

**6.3. Methods and material for containment and cleaning up**

For containment : Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Methods for cleaning up : After cleaning, flush away traces with water. Ensure all waste water is collected and treated via a waste water treatment plant.

**6.4. Reference to other sections**

No additional information available

**SECTION 7: Handling and storage**
**7.1. Precautions for safe handling**

No additional information available

**7.2. Conditions for safe storage, including any incompatibilities**

Storage conditions : Store in a cool dry place.

Prohibitions on mixed storage : Strong acid. Oxidizing agents.

Storage area : Keep container in a well-ventilated place.

**7.3. Specific end use(s)**

No additional information available

**SECTION 8: Exposure controls/personal protection**
**8.1. Control parameters**

No additional information available

**8.2. Exposure controls**

Hand protection : Wear protective gloves. Neoprene gloves. (EN 374).

Eye protection : Tightly sealed safety glasses. (EN 166).

Skin and body protection : Avoid contact with skin, eye and clothing. For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes). Wear face protection. Take off contaminated clothing and wash before reuse.

Respiratory protection : In case of fine dispersion/spraying/misting: Filter respirator (full mask or mouth-piece) with filter: P2.

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state : Liquid

Colour : Light yellow.

Odour : mild odour.

Odour threshold : No data available

pH : 11

Melting point : No data available

Freezing point : -26 °C (60 Provifrost KF ECO:40 H2O)

Boiling point : +/- 100 °C

Flash point : Non-flammable.

Explosive limits : No data available

Vapour pressure : No data available

Density : 1,25 ... 1,39 g/ml @20°C

Solubility : Water: completely soluble

Log Pow : No data available

Self ignition temperature : No data available

Viscosity, dynamic : 2,8 cP @ 20 °C

Explosive properties : No data available.

Oxidising properties : No data available.

**9.2. Other information**

No additional information available

**SECTION 10: Stability and reactivity**
**10.1. Reactivity**

No additional information available

**10.2. Chemical stability**

Stable in use and storage conditions as recommended in item 7.

**10.3. Possibility of hazardous reactions**

No additional information available

**10.4. Conditions to avoid**

radiant heat. heat.

**10.5. Incompatible materials**

Strong acid. Oxidizing agents.

**10.6. Hazardous decomposition products**

Carbon oxides (COx).

**SECTION 11: Toxicological information**
**11.1. Information on toxicological effects**

Acute toxicity : Not classified

<b>Potassium formate (590-29-4)</b>	
LD50 oral rat	> 5000 mg/kg
Skin corrosion/irritation	: Not classified pH: 11
Serious eye damage/irritation	: Not classified pH: 11
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

**SECTION 12: Ecological information**
**12.1. Toxicity**

<b>Provifrost KF ECO(590-29-4)</b>	
LC50 fishes 1	3275 mg/l (96h/Pimephales promelas)
LC50 other aquatic organisms 1	2750 mg/l (48h/Daphnia magna)

**12.2. Persistence and degradability**

<b>Provifrost KF ECO(590-29-4)</b>	
Biochemical oxygen demand (BOD)	0,079 kg/l (5 days/20°C)
Chemical oxygen demand (COD)	0,101 g O2/g substance

**12.3. Bioaccumulative potential**

<b>Provifrost KF ECO(590-29-4)</b>	
Log Pow	No data available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Other adverse effects**

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Remove according to the regulations.

## SECTION 14: Transport information

No dangerous good in sense of transport regulations.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

Contains no REACH candidate substance

#### 15.1.2. National regulations

Water hazard class (WGK) : 1 - slightly hazardous to water

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of R-, H- and EUH-phrases::

ERC1	Manufacture of substances
ERC2	Formulation of preparations
PC4	Anti-Freeze and de-icing products
PROC1	Use in closed process, no likelihood of exposure
PROC11	Non industrial spraying
PROC3	Use in closed batch process (synthesis or formulation)
PROC7	Industrial spraying
PROC8a	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
SU0	Other
SU10	Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU3	Industrial uses: Uses of substances as such or in preparations* at industrial sites
SU8	Manufacture of bulk, large scale chemicals (including petroleum products)

**Disclaimer:**

The purpose of this safety data sheet is to provide information about the safety, health and environmental aspects of the product concerned. The information in this safety data sheet is based on current expertise. Provion provides this information in good faith and to the best of its ability.

This data sheet contains no guarantees as to the suitability of the product for a particular purpose or about any particular characteristics of the product. The purchaser/consumer is personally responsible for his/her use of the product and for taking precautions appropriate to its use.

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