

Material Safety Data Sheet / Safety Data Sheet

Enfoss Technical Soluble Phosphite Fertilizer

Section 1. Chemical Product and Company Identification

Product name : Potassium Phosphite/Phosphate Fertilizer

Trade name : Enfoss Technical Soluble Phosphite Fertilizer

Synonym : Phosphorus salt

Fertilizer formula : 3-23-33

Chemical formula : Not applicable.

Material uses : Fertilizer for nutrigation and foliar feeding.

Manufactured by: Plant Science Inc. 2934 Vandorf Sideroad, Gormley, ON, CDA, L4M6N9, 1-866-499-0659

Emergency telephone number : After hours, holiday's, and all other non business hours; call the Ontario poison centre at 1-800-268-9017

Section 2. Hazards identification

Physical state : Solid. (Moderately hygroscopic crystalline powder.)

Emergency overview : No specific hazard.

USE WITH CARE.

Follow good industrial hygiene practice. Seal properly after usage. Store under cool dry conditions. Keep out of the reach of children.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes : No known significant effects or critical hazards. Skin

: No known significant effects or critical hazards. Inhalation

: No known significant effects or critical hazards. Ingestion :

No known significant effects or critical hazards.

Potential chronic health : Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

effects Mutagenic effects: Not applicable.

Teratogenic Effects: Not applicable.

Over-exposure : Ingestion may cause gastrointestinal irritation, vomiting and diarrhea. signs/symptoms

See toxicological information (section 11)

Section 3. Composition, Information on Ingredients

CAS number

United States

Phosphoric acid, potassium salt 7778-77-0

Phosphorous acid, potassium salt 13492-26-7

This material is classified as not hazardous under OSHA regulations.

See Chapters 8, 11 and 14 for details.

Continued on next page

Section 4. First aid measures

Eye contact : Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.

Skin contact : Wash with soap and water. Get medical attention if symptoms occur.

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.

Ingestion : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Notes to physician : No specific antidote. Medical staff must contact Poison Control Center.

Section 5. Fire fighting measures

Flammability of the product : Non-flammable.

Products of combustion : Not available.

Fire-fighting media and : Use an extinguishing agent suitable for the surrounding fire.
instructions

Special protective : Fire-fighters should wear appropriate protective equipment and self-contained breathing equipment for fire-fighters apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire : Non-combustible.

hazards

Special remarks on : Non-explosive under normal conditions.
explosion hazards

Section 6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains
and sewers.

Methods for cleaning up : If emergency personnel are unavailable, vacuum or carefully scoop up spilled material

and place in an appropriate container for disposal by incineration. Avoid creating dusty conditions and prevent wind dispersal.

Section 7. Handling and storage

Handling : Wash thoroughly after handling.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure controls, personal protection

Engineering controls : Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protection Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Respiratory : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Recommended: Safety glasses with side shields. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Disposable particulate mask

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hour/hours (breakthrough time): Disposable vinyl gloves. Continued on the next page.

Enfoss Technical Soluble Phosphite Fertilizer
Page: 3/5

Skin/Body : Not applicable.

Personal protection in case : Safety glasses, goggles or face shield. Impervious gloves. Full suit. Boots. Wear of a large spill MSHA/NIOSH-approved self-contained breathing apparatus or equivalent and full protective gear.

Product name Exposure limits United States
Mono Potassium Phosphate ACGIH TLV (United States).
TWA: 5 mg/m³ 8 hour/hours. Form: Dust
Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Physical state : Solid. (Moderately hygroscopic crystalline powder.)

Color : White.

Odor : Odorless.

pH : 3.5 to 4.5 (Conc. (% w/w): 1) [Acidic.]

Melting/freezing point : >200C (392F)

Bulk density : 0.7 to 1.0 g/ml at 25C (77F).

Volatility : Non-volatile.

Evaporation rate : Non-volatile.

VOC : Not an organic solvent.

Viscosity : Non-viscous substance.

Solubility : Soluble in water.

Section 10. Stability and reactivity

Stability and reactivity : Stable in normal ambient conditions.

Conditions of instability : Dusting conditions, extreme humidity.

Incompatibility with various : Strong oxidizing materials, strong acids, strong alkalis.

Hazardous polymerization : Will not occur.

Section 11. Toxicological information

Toxicity data

Ingredient name Test Result Route Species

Mono Potassium Phosphate LD50 >2000 mg/kg Oral Rat

LD50 >4640 mg/kg Dermal Rabbit

Acute Effects

Eyes : No known significant effects or critical hazards. Skin

: No known significant effects or critical hazards. Inhalation

: No known significant effects or critical hazards. Ingestion :

No known significant effects or critical hazards.

Potential chronic health : Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Mutagenic effects: Not applicable.

Teratogenic Effects: Not applicable.

Special remarks on chronic : Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.
effects on humans

Continued on next page

Section 12. Ecological information

BOD and COD : Not applicable.

Biodegradable/OECD : Inorganic substance are not biodegradable.

Mobility : Soluble in water.

Persistence/degradability : Not applicable, since inorganic substance.

Other adverse effects : Substances, which contribute to eutrophication: Phosphates.

Section 13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Consult your local or regional authorities.

Section 14. Transport information

Classification

DOT/ IMDG/ IATA: Not regulated.

Label

Additional information

Section 15. Regulatory information

United States

U.S. Federal regulations : TSCA : All components listed.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations : California prop. 65: No products were found.

International regulations

International lists : All components listed are listed on major international inventories or exempted from being listed in Australia (AICS), Europe (EINECS/ELINCS), Korea (TCCL), Japan (METI/MOL), Philippines (RA6969).

Section 16. Other information

Hazardous Material

Information System (U.S.A.)

: Health 1

Fire hazard 0

Reactivity 0

Personal protection C

Continued on next page

Enfoss Technical Soluble Phosphite Fertilizer
Page: 5/5

National Fire Protection Association (U.S.A.) :
Flammability 0
Health Instability 0
Special 1

References : ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG.

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