



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Canadian WHMIS 2015

Revision date 07-Aug-2019

Revision Number 5.1

1. Identification

Product identifier

Product Name Polysulphate

Other means of identification

Product Code(s) 5003

Chemical formula $K_2Ca_2Mg(SO_4)_4 \times 2H_2O$

Synonyms Polyhalite

Recommended use of the chemical and restrictions on use

Recommended use Fertilizer

Restrictions on use No information available

Details of the supplier of the safety data sheet

Initial Supplier Identifier

ICL
622 Emerson Road - Suite 500
St. Louis, Missouri 63141, USA
Tel:(314)983-7884 Fax:(314)983-7607
e-mail:msdsinfo@icl-group.com

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. Hazard(s) identification

Classification

Not classified

Label elements

This product is not classified as hazardous according to the UN GHS guideline and labeling is not required

Hazard statements

Not classified.

Other information

No information available

3. Composition/information on ingredients

Substance

| Chemical name | CAS No. | Weight-% |
|---------------|------------|----------|
| Polyhalite | 15278-29-2 | 100 |

4. First-aid measures

Description of first aid measures

| | |
|--------------|--|
| Inhalation | Remove to fresh air. |
| Eye contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Skin contact | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician. |
| Ingestion | If swallowed, wash mouth thoroughly with plenty of water. Get medical attention immediately. NOTE: Never give an unconscious person anything to drink |

Most important symptoms and effects, both acute and delayed

| | |
|----------|--------------------------------|
| Symptoms | Gastrointestinal discomfort. . |
|----------|--------------------------------|

Indication of any immediate medical attention and special treatment needed

| | |
|--------------------|---|
| Note to physicians | Treat symptomatically and supportively. |
|--------------------|---|

5. Fire-fighting measures

| | |
|--|---|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Specific hazards arising from the chemical | May emit toxic fumes under fire conditions. |
| Hazardous combustion products | On decomposition product releases oxygen which may intensify fire. Oxides of sulfur. Magnesium oxide. |
| Explosion data Special protective equipment for fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. |

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

| | |
|----------------------|--|
| Personal precautions | Avoid dust formation. Ensure adequate ventilation. |
|----------------------|--|

Methods and material for containment and cleaning up

| | |
|-------------------------|---|
| Methods for containment | Prevent further leakage or spillage if safe to do so. |
|-------------------------|---|

| | |
|------------------------------------|--|
| Methods for cleaning up | Pick up and transfer to properly labeled containers. . |
| Environmental precautions | Should not be released into the environment. See Section 12 for additional Ecological Information. |
| Reference to other sections | See section 8 for more information. See section 13 for more information. |

7. Handling and storage

Precautions for safe handling

| | |
|--------------------------------|---|
| Advice on safe handling | Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Ensure adequate ventilation. |
|--------------------------------|---|

Conditions for safe storage, including any incompatibilities

| | |
|---------------------------|---|
| Storage Conditions | Keep container tightly closed in a dry and well-ventilated place. |
|---------------------------|---|

8. Exposure controls/personal protection

Control parameters

| | |
|------------------------|---|
| Exposure Limits | This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
|------------------------|---|

| Chemical name | Alberta | British Columbia | Ontario | Quebec |
|--------------------------|---------|------------------|---------|--------|
| Polyhalite 15278-29-2 | - | - | - | - |

Appropriate engineering controls

| | |
|-----------------------------|---|
| Engineering controls | Showers Eyewash stations Ventilation systems. |
|-----------------------------|---|

Individual protection measures, such as personal protective equipment

| | |
|---------------------------------------|---|
| Eye/face protection | Chemical safety goggles. |
| Hand protection | Protective gloves |
| Respiratory protection | In case of insufficient ventilation wear suitable respiratory equipment. Filter P2. |
| Skin and body protection | Lightweight protective clothing. |
| General hygiene considerations | Handle in accordance with good industrial hygiene and safety practice. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided. |

9. Physical and chemical properties

Information on basic physical and chemical properties

| | |
|-----------------------|--------------------|
| Physical state | Solid |
| Appearance | Powder granules |
| Color | Gray |

| | | |
|--|--|--------------------------------|
| Odor | white Odorless | |
| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
| pH | Neutral | None known |
| Melting point / freezing point | no data available | |
| Boiling point / boiling range | no data available | Not determined |
| Flash point | no data available | Not Applicable |
| Evaporation rate | Not Applicable | |
| Flammability (solid, gas) | Not flammable | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | no data available | |
| Lower flammability or explosive limits | no data available | |
| Vapor pressure | no data available | |
| Vapor density | no data available | None known |
| Relative density | no data available | None known |
| Water solubility | Soluble | |
| Solubility in other solvents | no data available | None known |
| Partition coefficient | Not Applicable | |
| Autoignition temperature | . Not self-ignitable | None known |
| Decomposition temperature | no data available | None known |
| Kinematic viscosity | no data available | None known |
| Dynamic viscosity | Not Applicable | None known |
| <u>Other information</u> | | |
| Oxidizing properties | The structure indicates non oxidizing properties | |
| Explosive properties | Product does not present an explosion hazard | |
| Bulk density | 1.4-1.8 g/cm ³ @ 20°C | |

10. Stability and reactivity

| | |
|------------------------------------|--|
| Reactivity | No reactive hazards known/expected. |
| Chemical stability | Stable under normal conditions. |
| Possibility of Hazardous Reactions | None under normal processing. |
| Conditions to avoid | To avoid thermal decomposition, do not overheat. |
| Incompatible materials | None known based on information supplied. |
| Hazardous decomposition products | Sulfur oxides. Magnesium oxide. Oxygen. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|--|
| Product Information | Product does not present an acute toxicity hazard based on known or supplied information |
|---------------------|--|

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|----------|---------------------------|
| Symptoms | No information available. |
|----------|---------------------------|

Acute toxicity

Numerical measures of toxicity

No information available

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--------------------------|-------------------|-------------|-----------------|
| Polyhalite 15278-29-2 | >5000 mg/kg (Rat) | - | - |

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen

| Chemical name | ACGIH | IARC | NTP | US OSHA |
|--------------------------|-------|------|-----|---------|
| Polyhalite 15278-29-2 | - | - | - | - |

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard Not expected.

12. Ecological information

Ecotoxicity .

Component information

| Chemical name | Algae/aquatic plants | Fish | Crustacea | Toxicity to microorganisms |
|--------------------------|----------------------|------|-----------|----------------------------|
| Polyhalite 15278-29-2 | - | - | - | - |

Persistence and degradability Not relevant for inorganic salts.

Bioaccumulation Not expected to bioaccumulate.

| Chemical name | Partition coefficient |
|--------------------------|-----------------------|
| Polyhalite 15278-29-2 | - |

Mobility No information available.

Other adverse effects This product is used as fertilizer. However, large spills can kill vegetation. Prevent large quantities from entering waterways.

13. Disposal considerations

Waste treatment methods

| | |
|--|--|
| Waste from residues/unused products | Dispose of in a safe manner in accordance with local/national regulations. |
| Contaminated packaging | Empty containers should be disposed of in accordance with all applicable laws and regulations. |

14. Transport information

| | |
|----------------------------|---------------|
| <u>TDG</u> | Not regulated |
| <u>DOT</u> | Not regulated |
| Special precautions | None |
| <u>MEX</u> | Not regulated |
| <u>IATA</u> | Not regulated |
| Special precautions | None |
| <u>IMDG</u> | Not regulated |
| Special precautions | None |

15. Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

Canada - Significant New Activity Notices Not Applicable

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not Applicable

The Stockholm Convention on Persistent Organic Pollutants Not Applicable

The Rotterdam Convention Not Applicable

International Inventories

GHS hazardous component CAS registry numbers appearing in section 3 may differ from substances appearing in section 15 due to country or regional chemical inventory coverage requirements, however, remain in compliance with the inventory
Products that are used as food additives are exempt from listing in international chemical inventories

| | |
|--------------|--------------------|
| TSCA | Listed or exempted |
| DSL | Listed or exempted |
| ENCS | Listed or exempted |
| IECSC | Listed or exempted |
| KECL | Listed or exempted |
| PICCS | Listed or exempted |
| AIIC | Listed or exempted |
| NZIoC | Listed or exempted |
| TCSI | Listed or exempted |
| NCI | Listed or exempted |
| TECI | Listed or exempted |
| NSQ | Listed or exempted |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory
NCI - Vietnam National Chemicals Inventory
TECI - Thailand Inventory FDA Existing Chemicals
NSQ - Mexico National Inventory of Chemical Substances

16. Other information

| | | | | |
|-------------|-------------------------|-----------------------|---------------------------|---|
| NFPA | Health hazards 0 | Flammability 0 | Instability 0 | Physical and chemical properties - |
| HMIS | Health hazards 0 | Flammability 0 | Physical hazards 0 | Personal protection X |

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AELG(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

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End of Safety Data Sheet