

Potassium sulfite

sc-253311

Material Safety Data Sheet



The Power is Question

Hazard Alert Code Key:

EXTREME

HIGH

MODERATE

LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

Potassium sulfite

STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

NFPA



SUPPLIER

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EMERGENCY

ChemWatch
Within the US & Canada: 877-715-9305
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(1-800-CHEMCALL) or call +613 9573 3112

SYNONYMS

K₂S-O₃, "potassium sulphite", "sulfurous acid, dipotassium salt", "sulphurous acid, dipotassium salt"

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability:	0		
Toxicity:	2		
Body Contact:	2		
Reactivity:	1		
Chronic:	2		

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4



CANADIAN WHMIS SYMBOLS



EMERGENCY OVERVIEW

RISK

Contact with acids liberates toxic gas.
Irritating to eyes, respiratory system and skin.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

- Accidental ingestion of the material may be damaging to the health of the individual.
 - Ingestion of sulfite salts may cause gastric irritation.
- Large doses may produce violent colic, diarrhea, circulatory disturbance, depression of vital functions and, sometimes, death.

EYE

- This material can cause eye irritation and damage in some persons.

SKIN

- This material can cause inflammation of the skin on contact in some persons.
 - The material may accentuate any pre-existing dermatitis condition.
 - Skin contact is not thought to have harmful health effects, however the material may still produce health damage following entry through wounds, lesions or abrasions.
 - Open cuts, abraded or irritated skin should not be exposed to this material.
 - Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
- Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

- The material can cause respiratory irritation in some persons.
- The body's response to such irritation can cause further lung damage.
- Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual.
 - Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.
 - Sulfur dioxide irritation probably results from the action of sulfurous acid as the highly soluble gas dissolves in mucous fluid.
- Short-term exposure causes bronchoconstriction measurable as an increase in flow-resistance.

CHRONIC HEALTH EFFECTS

- Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.
- Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
- Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.
- Repeated exposure of animals to airborne sulfur dioxide (SO₂) can produce a thickening of the mucous layer in the trachea and an increase in goblet cells and mucous glands similar to pathological changes found in chronic human bronchitis.
- Chronic exposure to sulfur dioxide (SO₂) particulate complexes, present in polluted air, have been associated with the aggravation of chronic cardiovascular diseases such as asthma, chronic pulmonary disease, and coronary artery disease (this may occur at levels of 6-10 ug/m³ for 24 hours). An association exists between persistent cough and sputum production, particularly in women and non-smokers. A 10-year follow study on workers exposed to a mean sulfur dioxide concentration of up to 33 ppm did not reveal an increased prevalence of chronic respiratory disease or decreased pulmonary function.
- By contrast, studies of smelter workers, exposed to concentrations below 2 ppm, suggest that chronic respiratory disease may develop and that workers exposed at concentrations exceeding 1 ppm show accelerated loss of pulmonary function.
- Although SO₂ is not a carcinogen, the apparent increases in mortalities amongst arsenic-exposed smelter workers was greater when exposures included both high arsenic concentrations and moderate to high SO₂ exposures, suggesting that SO₂ might act as a promoter.
- Intermittent exposure of rats to benz[a]pyrene along with inhalation of SO₂ at 4-10 ppm, 1-6 hours per day, 5 days per week, produced substantial increases in respiratory tract squamous cell carcinomas compared to that associated with exposure to B[a]P or SO₂ alone.
- Sulfites and bisulfites can cause narrowing of the airways, stomach upset, flushing, low blood pressure, tingling sensation, itchy wheal, swelling and shock, and asthmatics are especially prone.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
potassium sulfite	10117-38-1	>98
hydrolyses to		
sulfur dioxide	7446-09-5	

Section 4 - FIRST AID MEASURES

SWALLOWED

· If swallowed do NOT induce vomiting. · If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

EYE

■ If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

SKIN

■ If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).

INHALED

· If fumes or combustion products are inhaled remove from contaminated area. · Lay patient down. Keep warm and rested.

NOTES TO PHYSICIAN

■ Treat symptomatically.

Depending on the degree of exposure, periodic medical examination is indicated. The symptoms of lung edema often do not manifest until a few hours have passed and they are aggravated by physical effort.

Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG):	Not applicable
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Upper Explosive Limit (%):	Not applicable
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Specific Gravity (water=1):	2.5
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Lower Explosive Limit (%):	Not applicable
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EXTINGUISHING MEDIA

· There is no restriction on the type of extinguisher which may be used.

Use extinguishing media suitable for surrounding area.

FIRE FIGHTING

· Alert Emergency Responders and tell them location and nature of hazard.

· Wear breathing apparatus plus protective gloves for fire only.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

· Non combustible.

· Not considered to be a significant fire risk, however containers may burn.

Decomposition may produce toxic fumes of: sulfur oxides (SOx), metal oxides.

May emit poisonous fumes.

May emit corrosive fumes.

FIRE INCOMPATIBILITY

■ None known.

PERSONAL PROTECTION

Glasses:

Chemical goggles.

Gloves:

Respirator:

Type E-P Filter of sufficient capacity

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

· Remove all ignition sources.

· Clean up all spills immediately.

· Avoid contact with skin and eyes.

· Control personal contact by using protective equipment.

· Use dry clean up procedures and avoid generating dust.

· Place in a suitable, labelled container for waste disposal.

MAJOR SPILLS

■ Moderate hazard.

· CAUTION: Advise personnel in area.

· Alert Emergency Responders and tell them location and nature of hazard.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

· Avoid all personal contact, including inhalation.

· Wear protective clothing when risk of exposure occurs.

RECOMMENDED STORAGE METHODS

· Polyethylene or polypropylene container.

· Check all containers are clearly labelled and free from leaks.

STORAGE REQUIREMENTS

· Store in original containers.

· Keep containers securely sealed.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	TWA F/CC	Notes
Canada - Ontario Occupational Exposure Limits	potassium sulfite (Particles (Insoluble or Poorly Soluble) Not Otherwise)		10 (I)						
Canada - British Columbia Occupational Exposure Limits	potassium sulfite (Particles (Insoluble or Poorly Soluble) Not Otherwise Classified (PNOC))		10 (N)						
Canada - Ontario Occupational Exposure Limits	potassium sulfite (Specified (PNOS) / Particules (insolubles ou peu solubles) non précisées par ailleurs)		3 (R)						
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	potassium sulfite (Particulates not otherwise regulated Respirable fraction)		5						
US - California Permissible Exposure Limits for Chemical Contaminants	potassium sulfite (Particulates not otherwise regulated Respirable fraction)		5						(n)
US - Oregon Permissible Exposure Limits (Z-1)	potassium sulfite (Particulates not otherwise regulated (PNOR) (f) Total Dust)	-	10						Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. PNOR means "particles not otherwise regulated."
US - Michigan Exposure Limits for Air Contaminants	potassium sulfite (Particulates not otherwise regulated, Respirable dust)		5						
US - Oregon Permissible Exposure Limits (Z-1)	potassium sulfite (Particulates not otherwise regulated (PNOR) (f) Respirable Fraction)	-	5						Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. PNOR means "particles not

otherwise regulated.”

US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	potassium sulfite (Particulates not otherwise regulated (PNOR)(f)-Respirable fraction)		5			
Canada - Prince Edward Island Occupational Exposure Limits	potassium sulfite (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)		10			See Appendix B current TLV/BEI Book
Canada - British Columbia Occupational Exposure Limits	sulfur dioxide (Sulfur dioxide)	2		5		
Canada - Ontario Occupational Exposure Limits	sulfur dioxide (Sulfur dioxide / Soufre, dioxyde de)	2	5.2	5	10.4	
US - Minnesota Permissible Exposure Limits (PELs)	sulfur dioxide (Sulfur dioxide)	2	5	5	13	
US ACGIH Threshold Limit Values (TLV)	sulfur dioxide (Sulfur dioxide)			0.25		TLV Basis: pulmonary function; lower respiratory tract irritation
US NIOSH Recommended Exposure Limits (RELs)	sulfur dioxide (Sulfur dioxide)	2	5	5	13	
Canada - Alberta Occupational Exposure Limits	sulfur dioxide (Sulphur dioxide)	2	5.2	5	13	
US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)	sulfur dioxide (SULFUR DIOXIDE)	0.01				
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	sulfur dioxide (Sulfur dioxide)	2	5	5	10	
US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants	sulfur dioxide (Sulfur dioxide)	5	13			
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	sulfur dioxide (Sulfur dioxide)	2	5	5	10	
US - California Permissible Exposure Limits	sulfur dioxide (Sulfur dioxide)	2	5	5	10	

for Chemical Contaminants					
US - Idaho - Limits for Air Contaminants	sulfur dioxide (Sulfur dioxide)	5	13		
US OSHA Permissible Exposure Levels (PELs) - Table Z1	sulfur dioxide (Sulfur dioxide)	5	13		
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	sulfur dioxide (Sulphur dioxide)	2		5	
US - Hawaii Air Contaminant Limits	sulfur dioxide (Sulfur dioxide)	2	5	5	10
US - Alaska Limits for Air Contaminants	sulfur dioxide (Sulfur dioxide)	2	5	5	10
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	sulfur dioxide (Sulphur dioxide)	5	13	5	13
Canada - Yukon Carcinogens with a Permitted Exposure	sulfur dioxide (Arsenic trioxide production - (SO) ₂)	C5			
US - Washington Permissible exposure limits of air contaminants	sulfur dioxide (Sulfur dioxide)	2		5	
US - Michigan Exposure Limits for Air Contaminants	sulfur dioxide (Sulfur dioxide)	2	5	5	10
Canada - Prince Edward Island Occupational Exposure Limits	sulfur dioxide (Sulfur dioxide)			0.25	TLV Basis: pulmonary function; lower respiratory tract irritation
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	sulfur dioxide (Sulfur dioxide)	5	13		
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	sulfur dioxide (Sulfur dioxide)	2	5.2	5	13
US - Oregon Permissible Exposure Limits (Z-1)	sulfur dioxide (Sulfur dioxide)	5	13		
Canada - Northwest Territories Occupational Exposure Limits	sulfur dioxide (Sulphur dioxide)	2	5	5	13

(English)

Canada - Nova
Scotia
Occupational
Exposure Limits

sulfur dioxide
(Sulfur dioxide)

0.25

TLV Basis:
pulmonary
function;
lower
respiratory
tract irritation

ENDOELTABLE

PERSONAL PROTECTION



RESPIRATOR

- type e-p filter of sufficient capacity.
- Consult your EHS staff for recommendations

EYE

- Safety glasses with side shields.
- Chemical goggles.

HANDS/FEET

- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

• When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.

• When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.

• Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

- polychloroprene
- nitrile rubber
- butyl rubber
- fluorocautchouc
- polyvinyl chloride

Gloves should be examined for wear and/ or degradation constantly.

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

ENGINEERING CONTROLS

- Local exhaust ventilation usually required. If risk of overexposure exists, wear an approved respirator.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Solid.

Contact with acids liberates toxic gas.

State	Divided solid	Molecular Weight	158.26
Melting Range (°F)	Decomposes.	Viscosity	Not Applicable
Boiling Range (°F)	Not available.	Solubility in water (g/L)	Reacts
Flash Point (°F)	Not Applicable	pH (1% solution)	8 approx.
Decomposition Temp (°F)	Not available.	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not applicable	Vapour Pressure (mmHG)	Not applicable

Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	2.5
Lower Explosive Limit (%)	Not applicable	Relative Vapor Density (air=1)	Not applicable
Volatile Component (%vol)	Not applicable	Evaporation Rate	Not applicable

APPEARANCE

White crystals or powder, soluble in water, sparingly soluble in alcohol, decomposes on heating and slowly oxidises in air to sulfate. Decomposed by dilute acids with evolution of sulfur dioxide.

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

STORAGE INCOMPATIBILITY

- Contact with acids produces toxic fumes.
- Inorganic reducing agents react with oxidizing agents to generate heat and products that may be flammable, combustible, or otherwise reactive. Their reactions with oxidizing agents may be violent.
- Incidents involving interaction of active oxidants and reducing agents, either by design or accident, are usually very energetic and examples of so-called redox reactions.
- Segregate from alcohol, water.
- Sulfites and hydrosulfites (dithionites) :
 - may react explosively with strong oxidising agents.
 - react with water or steam to produce corrosive acid solutions and sulfur oxide fumes - aqueous solutions are incompatible with oxidisers, strong acids, alkalis, ammonia, aliphatic amines, alkanolamines, alkylene oxides, amides, epichlorohydrin, organic anhydrides, isocyanates, nitromethane, vinyl acetate
 - aqueous solutions attack metals in presence of moisture
 - generate gaseous sulfur dioxide in contact with oxidising and nonoxidising acids.

Sulfur dioxide:

- reacts with water or steam forming sulfurous acid; reaction may be violent
- reacts with acrolein, alcohols, aluminium powder, alkali metals, amines, bromine, pentafluoride, caustics, caesium, acetylene carbide, chlorates, chlorine trifluoride, chromium powder, copper or its alloy powders, diethylzinc, fluorine, lead dioxide, lithium acetylene carbide, metal powders, monolithium acetylide-ammonia, nitryl chloride, potassium acetylene carbide, potassium acetylide, potassium chlorate, rubidium carbide, silver azide, sodium, sodium acetylide, stannous oxide; reaction may be violent
- decomposes above 60 deg. C releasing oxides of sulfur
- Incompatible with alkalis, alkylene oxides, ammonia, aliphatic amines, alkanolamines, amides, organic anhydrides, caesium monoxide, epichlorohydrin, ferrous oxide, halogens, interhalogens, isocyanates, lithium nitrate, manganese, metal acetylides, metal oxides, perbromyl fluoride, red phosphorus, potassium azide, rubidium acetylide, sodium hydride, sulfuric acid
- attacks some plastics, coatings and rubber
- attacks metals, especially chemically active metals, in the presence of moisture.
- NOTE: May develop pressure in containers; open carefully. Vent periodically.
- Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride.
- These trifluorides are hypergolic oxidisers. They ignite on contact (without external source of heat or ignition) with recognised fuels - contact with these materials, following an ambient or slightly elevated temperature, is often violent and may produce ignition.
- The state of subdivision may affect the results.

Reacts with water, steam or acids to form corrosive acid solution and sulfur oxide fumes.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

potassium sulfite

TOXICITY AND IRRITATION

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.
- Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

POTASSIUM SULFITE:

- No significant acute toxicological data identified in literature search.

SULFUR DIOXIDE:

TOXICITY	IRRITATION
Inhalation (rat) LC50: 2520 ppm/1h	Nil Reported
Inhalation (human) LCLo: 1000 ppm/10m	

Inhalation (human) TCLO: 3 ppm/5d

■ The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

400-500 ppm - immediately dangerous to life.

NOTE: Aggravates chronic pulmonary disease and increases the risk of acute and chronic respiratory disease - condition aggravated by smoking.

CARCINOGEN

Sulfites	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	3
Sulfur dioxide	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	3
Sulfur dioxide	US ACGIH Threshold Limit Values (TLV) - Carcinogens	Carcinogen Category	A4
sulfur dioxide	US - Rhode Island Hazardous Substance List	IARC	
TWAPPM~	US - Maine Chemicals of High Concern List	Carcinogen	A4

Section 12 - ECOLOGICAL INFORMATION

No data

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
potassium sulfite	No Data Available	No Data Available		
sulfur dioxide	LOW	No Data Available	LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

US EPA Waste Number & Descriptions

A. General Product Information

Reactivity characteristic: use EPA hazardous waste number D003 (waste code R).

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

! Puncture containers to prevent re-use and bury at an authorized landfill.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult Waste Management Authority for disposal.

Section 14 - TRANSPORTATION INFORMATION

■ Air transport may be forbidden if this material is flammable, corrosive or toxic gases may be released under normal conditions of transport.
NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

Section 15 - REGULATORY INFORMATION

potassium sulfite (CAS: 10117-38-1,7790-56-9) is found on the following regulatory lists;

"Canada Domestic Substances List (DSL)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals", "US Cosmetic Ingredient Review (CIR) Cosmetic ingredients found safe as used", "US DOE Temporary Emergency Exposure Limits (TEELs)", "US Food Additive Database", "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"

Regulations for ingredients

sulfur dioxide (CAS: 7446-09-5) is found on the following regulatory lists;

"Canada - Alberta Ambient Air Quality Objectives", "Canada - Alberta Occupational Exposure Limits", "Canada - British Columbia Occupational Exposure Limits", "Canada - Northwest Territories Occupational Exposure Limits (English)", "Canada - Nova Scotia

Occupational Exposure Limits","Canada - Ontario Occupational Exposure Limits","Canada - Prince Edward Island Occupational Exposure Limits","Canada - Prince Edward Island Occupational Exposure Limits - Carcinogens","Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)","Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits","Canada - Yukon Carcinogens with a Permitted Exposure","Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances","Canada Domestic Substances List (DSL)","Canada Environmental Protection Act (CEPA) 1999 - Schedule 1 Toxic Substances List","Canada Environmental Quality Guidelines (EQGs) Air","Canada Ingredient Disclosure List (SOR/88-64)","Canada National Pollutant Release Inventory (NPRI)","Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)","International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs","International Council of Chemical Associations (ICCA) - High Production Volume List","International Fragrance Association (IFRA) Survey: Transparency List","OECD Representative List of High Production Volume (HPV) Chemicals","US - Alaska Limits for Air Contaminants","US - California Occupational Safety and Health Regulations (CAL/OSHA) - Hazardous Substances List","US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)","US - California Permissible Exposure Limits for Chemical Contaminants","US - Hawaii Air Contaminant Limits","US - Idaho - Limits for Air Contaminants","US - Massachusetts Oil & Hazardous Material List","US - Michigan Exposure Limits for Air Contaminants","US - Minnesota Hazardous Substance List","US - Minnesota Permissible Exposure Limits (PELs)","US - New Jersey Right to Know Hazardous Substances","US - Oregon Hazardous Materials","US - Oregon Permissible Exposure Limits (Z-1)","US - Pennsylvania - Hazardous Substance List","US - Rhode Island Hazardous Substance List","US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants","US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants","US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants","US - Washington Permissible exposure limits of air contaminants","US - Wyoming List of Highly Hazardous Chemicals, Toxics and Reactives","US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants","US ACGIH Threshold Limit Values (TLV)","US ACGIH Threshold Limit Values (TLV) - Carcinogens","US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)","US Department of Homeland Security Chemical Facility Anti-Terrorism Standards - Chemicals of Interest","US DOE Temporary Emergency Exposure Limits (TEELs)","US EPA Acute Exposure Guideline Levels (AELs) - Final","US EPA High Production Volume Chemicals Additional List","US FDA Direct Food Substances Generally Recognized as Safe","US Food Additive Database","US List of Lists - Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112(r) of the Clean Air Act","US NFPA 45 Fire Protection for Laboratories Using Chemicals - Flammability Characteristics of Common Compressed and Liquefied Gases","US NIOSH Recommended Exposure Limits (RELs)","US OSHA List of Highly Hazardous Chemicals, Toxics and Reactives","US OSHA Permissible Exposure Levels (PELs) - Table Z1","US SARA Section 302 Extremely Hazardous Substances","US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory","USA: Chemical Facility Anti-Terrorism Standards - List Appendix A - 6CFR 27"

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE

- Inhalation and/or ingestion may produce health damage*.
- Cumulative effects may result following exposure*.

* (limited evidence).

Ingredients with multiple CAS Nos

Ingredient Name CAS potassium sulfite 10117-38-1, 7790-56-9

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- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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