Chemical Product and Company Identification Section 1

665 Carbon Street Billings, MT 59102 800-860-6272

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CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world). For laboratory and industrial use only. Not for drug, food or household use.

Product	IODINE-POTASSIUM IODIDE SOLUTION
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Synonyms Iodine-Iodide / Iodine Solution / Iodine / Iodine Lugol's Dilute / Gram's Iodine Solution / Dilute Lugol's Solution

Section 2 Hazards Identification

Signal word: WARNING Pictograms: GHS07 / GHS09

Target organs: Thyroid, kidneys, endocrine system, skin, eyes,

reproductive system, central nervous system.



GHS Classification:

Acute toxicity, dermal (Category 4) Acute toxicity, inhalation (Category 4) Aquatic toxicity, acute (Category 1)

GHS Label information: Hazard statement(s):

H312: Harmful in contact with skin. H332: Harmful if inhaled. H400: Very toxic to aquatic life.

Precautionary statement(s):

P261: Avoid breathing mist/vapours/spray.

P271: Use only outdoors or in a well-ventilated area.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352: IF ON SKIN: Wash with plenty of water and soap. P312: Call a POISON CENTER or doctor if you feel unwell.

P362+P364: Take off contaminated clothing and wash it before reuse.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312: Call a POISON CENTER or doctor if you feel unwell.

P391: Collect spillage.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / Information on Ingredients						
Chemical Name		CAS#	%	EINECS			
Water Potassium iodide lodine		7732-18-5 7681-11-0 7553-56-2	95.10% 3.05% 1.85%	231-791-2 231-659-4 231-442-4			

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. Harmful if inhaled.

EYE CONTACT: MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: HARMFUL IN CONTACT WITH SKIN. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. Harmful in contact with skin.

Section 5 **Fire Fighting Measures**

Extinguishing Media: Use any media suitable for extinguishing supporting fire.

General information: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 **Accidental Release Measures**

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Page E1 of E2

Page E2 of E2 Section 7 Handling & Storage

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with adequate ventilation. Wash thoroughly after handling

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale vapors, mist or spray. Wash thoroughly after handling. Remove and wash clothing before reuse.

Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure Controls / Personal Protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits:	lodine CAS # 7553-56-2	TWA: 0.01 ppm ^(IFV) / STEL: 0.1 ppm ^(V)	STEL: C 0.1 ppm/C 1 mg/m ³	STEL: C 0.1 ppm/C 1 mg/m ³			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Physical & Chemical Properties Section 9

Appearance: Deep amber liquid. Odor: Characteristic odor Odor threshold: Not applicable. pH: Data not available.

Melting / Freezing point: ~ 0°C (~ 32°F) [water] Boiling point: ~ 100°C (212°F) [water]

Flash point: Not flammable.

Evaporation rate (Water = 1): < 1 Flammability (solid/gas): Not applicable. Explosion limits: Lower / Upper: Not applicable

Vapor pressure (mm Hg): 14 [water] Vapor density (Air = 1): 0.7 [water]

Relative density (Specific gravity): 1.0 [water]

Solubility(ies): Complete in water.

Partition coefficient: (n-octanol / water): Not applicable

Auto-ignition temperature: Not applicable Decomposition temperature: Data not available.

Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture

Section 10 Stability & Reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Stable under recommended storage conditions. Excessive temperatures which cause evaporation.

Incompatibilities with other materials: Metals or unsaturated organic compounds, ammonia solutions or alkaline solutions of ammonia salts. Will form explosive nitrogen iodides when reacted with gaseous ammonia.

Hazardous decomposition products: Toxic iodide fumes

Section 11 **Toxicological Information**

Acute toxicity: Oral-Rat LD50: 14,000 mg/kg [lodine CAS # 7553-56-2]

Skin corrosion/irritation: Data not available Serious eve damage/irritation: Data not available

Respiratory or skin sensitization: Inhalation-rat 3.1 mg/m³ / 24 hour / 13 weeks - continuous [lodine CAS # 7553-56-2]

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinggen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: Symptoms include cough, wheezing, and labored breathing. Symptoms may be delayed.

Ingestion: Causes abdominal pain, diarrhea, nausea, and vomiting. Ingestion of levels of 2-3 grams of iodine may cause death.

Skin: Contact may cause redness and pain.

Eyes: Contact causes watering of the eyes, redness and pain.

Signs and symptoms of exposure: Effects of short-term exposure: Lachrymator. The substance is severely irritating to the eyes and the respiratory tract, and is irritating to the skin. Inhalation of the vapor may cause asthma-like reactions. Inhalation of the vapor may cause lung edema. The effects may be delayed. Effects of long-term exposure: Repeated or prolonged contact may cause skin sensitization in rate cases. Repeated or prolonged inhalation exposure may cause asthma-like syndrome. The substance may have effects on the thyroid. Specific data not available for this mixture. Exercise appropriate procedures to minimize potential hazards..

Additional information: RTECS #: NN1575000 [lodine CAS # 7553-56-2]

Section 12 **Ecological Information**

Toxicity to fish: Very toxic to aquatic life.

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Transport Information (US DOT / CANADA TDG) Section 14

UN/NA number: Not applicable Shipping name: Not Regulated Hazard class: Not applicable Packing group: Not applicable

Exceptions: Not applicable 2016 ERG Guide # Not applicable Reportable Quantity: No Marine pollutant: No

Section 15 **Regulatory Information**

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
lodine Potassium iodide	Listed Listed	Not listed Not listed	Not listed Not listed	Listed Listed	Not listed Not listed	This product does not contain any chemicals known to the State of California to cause cancer or
						reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook

Revision Date: February 27, 2018 Supercedes: February 22, 2018 Form 06/2015

Page E1 of E2

Section 1 Chemical Product and Company Identification

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For laboratory and industrial use only.
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Product SODIUM CHLORIDE

Synonyms Common Salt / Rock Salt

Section 2 Hazards Identification

This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

Signal word: Not classified Pictograms: Not classified Target organs: None known

GHS Classification: Not classified

GHS Label information: Hazard statement(s): Not classified

Precautionary statement(s): Not classified

Supplementary information:

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

CAS # 7647-14-5	100%	EINECS 231-598-3	
7647-14-5	100%	231-598-3	

Section 4 First Aid Measures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage Page E2 of E2

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Store away from acids.

Section 8	Exposure Controls / Personal Protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits:	Sodium chloride	None established	None established	None established		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid, white crystals.

Odor: No odor

Odor threshold: Data not available.

pH: 4.0-9.0

Melting / Freezing point: 801°C (>1473°F) Boiling point: 1465°C (2669°F)

Flash point: 1465°C (2669°F)
Flash point: Non combustible

Evaporation rate (= 1): Data not available Flammability (solid/gas): Data not available.

Explosion limits: Lower / Upper: Data not available

Vapor pressure (mm Hg): 2.4

Vapor density (Air = 1): Data not available Relative density (Specific gravity): 2.16 @ 25°C

Solubility(ies): 1 g/2.8 ml water at 25°C

Partition coefficient: Data not available
Auto-ignition temperature: Data not available
Decomposition temperature: Data not available
Viscosity: Data not available.

Molecular formula: NaCl Molecular weight: 58.45

Section 10 Stability & Reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Wet conditions can cause caking and/or corrosion.

Incompatible materials: Strong acids

Hazardous decomposition products: Electrolysis can produce chlorine gas.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 3000 mg/kg Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation of dust leaves salty taste with mild irritation to mucous membrane in nose and throat.

Ingestion: Ingestion of large amounts (more than 0.1 pound) may cause vomiting.

Skin: Contact may cause very slight irritation. Eyes: Contact may cause very slight irritation.

Signs and symptoms of exposure: Gross overexposure over a long period of time, results in dehydration.

Additional information: RTECS #: VZ4725000

Section 12 Ecological Information

Toxicity to fish: Lepomis macrochirus (fish, freshwater) LC50: 9,675 mg/l/96 hours

Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea) EC50: 6,175 mg/l/16 hours

Toxicity to algae: Anabaena variabilis (Algae) LC50: 23,565 mg/l/4 day

Persistence and degradability: No data available

Mobility in soil: No data available

Bioaccumulative potential: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Not applicable Shipping name: Not Regulated

Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No Marine pollutant: No

Exceptions: Not applicable 2016 ERG Guide # Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Sodium chloride	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or
						reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Form 06/2015 Revision Date: March 28, 2018 Supercedes: December 15, 2016

Section 1 Chemical Product and Company Identification

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Page E1 of E2

Product STARCH, SOLUBLE, POTATO

Synonyms | Amylodextrin / Amylogen

Section 2 Hazards Identification

This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

Signal word: Not classified Pictograms: Not classified Target organs: None known

GHS Classification: Not classified

GHS Label information:

Hazard statement(s): Not classified Precautionary statement(s): Not classified

Supplemental information:

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Combustible dust Physical hazards not otherwise classified (PHNOC) - Not Known

Composition / Information on Ingredients					
	CAS#	%	EINECS		
	9005-84-9	100%	232-686-4		
	Composition / Information on	CAS#	CAS # %	CAS# % EINECS	

Section 4 First Aid Measures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dust dispersed in air becomes explosive when exposed to ignition sources.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage Page E2 of E2

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8	Exposure Controls / Personal Protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits:	Starch (9005-25-8)	TWA: 10 mg/m ³ (A4)	TWA: 15 mg/m ³ (Total dust)	TWA: 10 mg/m ³ (Total dust)			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid, white powder.

Odor: Bland odor.

Odor threshold: Data not available.

pH: Data not available

Melting / Freezing point: Data not available

Boiling point: Data not available **Flash point:** Data not available

Evaporation rate (= 1): Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): Data not available

Vapor density (Air = 1): Data not available Relative density (Specific gravity): 1.45 Solubility(ies): 5 g/100 ml water @ 20°C Partition coefficient: Data not available

Auto-ignition temperature: 410°C (770°F) [cloud] Decomposition temperature: Data not available.

Viscosity: Data not available. **Molecular formula:** $(C_6H_{10}O_5)_n$ **Molecular weight:** $(162.15)_n$

Section 10 Stability & Reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition. Avoid practices which produce dust.

Incompatible materials: No data available.

Hazardous decomposition products: None.

Section 11 Toxicological Information

Acute toxicity: Data not available

Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation of high concentrations may cause unpleasant deposits in the nasal passages.

Ingestion: Ingestion may cause stomach irritation.

Skin: No hazard known.

Eyes: Contact with eyes may cause irritation.

Signs and symptoms of exposure: See Potential health effects above. Additional information: RTECS #: GM5090000 [Starch 9005-25-8]

Section 12 Ecological Information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: Not applicable Shipping name: Not Regulated

Hazard class: Not applicablePacking group:Not applicableReportable Quantity:NoMarine pollutant:NoExceptions: Not applicable2016 ERG Guide # Not applicable

Exceptions: Not applicable 2016 ERG Gu Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Starch, soluble	Listed	Not listed	Not listed	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Form 06/2015 Revision Date: March 21, 2018 Supercedes: December 19, 2016

Section 1 Chemical Product and Company Identification

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Page E1 of E2

Product TALC
Synonyms Talcum

Section 2 Hazards Identification

This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

Signal word: Not classified
Pictograms: Not classified
Target organs: Respiratory system

GHS Classification: Not classified

GHS Label information: Hazard statement(s): Not classified

Precautionary statement(s):

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients						
Chemical Name	CAS#	%	EINECS			
Talc*	14807-96-6	100%	238-877-9			
*(hydrous magnesium silicate mineral m	nixture)					
	,					

Section 4 First Aid Measures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: Product will not burn.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Recover for use if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Page E2 of E2 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8	Exposure Controls / Personal Protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits:	Talc, containing no asbestos fibers	TWA: 2 mg/m ³ (A4) respirable fraction	20 mppcf (containing < 1% quartz)	TWA: 2 mg/m ³ and < 1% quartz		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Physical & Chemical Properties Section 9

Appearance: Solid, white powder.

Odor: No odor.

Odor threshold: Data not available.

pH: Data not available

Melting / Freezing point: Data not available

Boiling point: Data not available

Flash point: Non combustible

Evaporation rate (= 1): Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): Data not available

Vapor density (Air = 1): Data not available Relative density (Specific gravity): 2.85

Solubility(ies): Insoluble

Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available

Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture

Stability & Reactivity Section 10

Chemical stability: Stable Conditions to avoid: None known Incompatible materials: Non-reactive

Hazardous decomposition products: None known

Hazardous polymerization: Will not occur.

Section 11 **Toxicological Information**

Acute toxicity: Data not available

Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC classified: Group 3: Not classifiable as to its carcinogenicity to humans.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Ca Prop 65: 🛦 WARNING! This product can expose you to a chemical, crystalline silica, which is known to the State of California to cause cancer.

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation of high concentrations may cause mechanical irritation and discomfort.

Ingestion: This material is not considered to be an ingestion hazard.

Skin: Mechanical skin irritation is possible but unlikely. Eyes: Contact with eyes may cause mechanical irritation.

Signs and symptoms of exposure: See Potential health effects above.

Additional information: RTECS #: WW2710000

Section 12 **Ecological Information**

Toxicity to fish: Brachydanio rerio (fish, freshwater) LC50: >100 g/l/24 hours Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Transport Information (US DOT / CANADA TDG) Section 14

UN/NA number: Not applicable Shipping name: Not Regulated

Hazard class: Not applicable Packing group: Not applicable Reportable Quantity: No Marine pollutant: No Exceptions: Not applicable 2016 ERG Guide # Not applicable

Regulatory Information Section 15

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Talc	Listed	Not listed	Not listed	Listed	Not listed	WARNING -Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook

Revision Date: June 21, 2018 Supercedes: April 2, 2018 Form 06/2015



Prepared to comply with GHS (Globally Harmonized System) and OSHA-Hazard Communication Standard 29 CFR.1910.1200, System of Classifying and Labeling of Chemicals

Material Name: Peat

Section 1: Identification

1.1 Product trade names: Sphagnum peat moss

1.2 Product Class: Natural organic planting mixes

Product Codes: N/A

CAS/EC Number: Product does not have a CAS or EC number.

Intended Use: Domestic gardening, planting mixture, and other general horticultural

purpose.

1.3 Supplier:

County Materials Corp. 205 North St., P.O. Box 100

Marathon, WI 54448-0100

General Information Telephone: (800) 289-2569 Email: riskclaimssafety@countymaterials.com

1.4 Emergency telephone:

715-223-7788

Section 2: Hazard(s) Identification

2.1 Classification:

This material is not considered hazardous according to the OSHA Hazard Communication Standard or GHS Hazard Classification and Labelling System.

2.2 Labeling:

Pictograms:

None.

Signal Word:

None.

Hazard Statements:

None.

Precautionary Statements:

P261 – Avoid breathing dusts.

P271 – Use only outdoors or in a well-ventilated area.

P280 – Wear protective gloves, protective clothing, and eye protection.

2.3 Other Hazards: This product is not classified as hazardous under normal conditions of use and storage. Exposure to entrained dusts may occur during agitation of dried product and can cause irritation to respiratory system. Contact with eyes and skin may cause irritation.

Section 3: Composition/Information on Ingredients

Components	Components CAS Number		Concentration%	
Peat			100	

This product contains natural agricultural components and decomposed organic matter. It is not anticipated to contain quantities of naturally occurring crystalline silica at greater than 0.1%.



Prepared to comply with GHS (Globally Harmonized System) and OSHA-Hazard Communication Standard 29 CFR.1910.1200, System of Classifying and Labeling of Chemicals

Material Name: Peat

Section 4: First-Aid Measures

4.1 Description of first aid measures:

<u>Inhalation:</u> Airborne dust may be inhaled. Remove person to fresh air. Seek medical attention if breathing difficulty develops or persists.

<u>Skin Contact:</u> Wash skin with soap and plenty of water. If irritation develops or persists, seek medical attention.

<u>Eye Contact</u>: Rinse eyes thoroughly with potable water for at least 15 minutes and remove contacts if easy to do. Rinse under eyelids to remove any particles. Seek medical attention for any abrasions or if irritation develops or persists.

<u>Ingestion:</u> Rinse mouth with copious amounts of water. If the person is conscious and aware, give large amounts of water to rinse material and taste from the mouth. Never attempt to make an unconscious person drink or vomit. If the person is unconscious it may be necessary to sweep the blockage out of the mouth using a finger. Seek emergency medical attention if deemed necessary.

4.2 Most important symptoms and effects:

<u>Inhalation:</u> May cause irritation of the respiratory tract.

Skin Contact: May cause irritation.

Eye Contact: May cause irritation, abrasions, redness, and permanent eye damage.

Ingestion: Ingestion of large amounts may cause gastrointestinal irritation, choking/blockage.

4.3 Indication of any immediate medical attention and special treatment needed: See Section 4.1.

Section 5: Fire-Fighting Measures

- **5.1 Extinguishing media:** Product is not flammable. Use appropriate media for fire adjacent to product.
- **5.2 Special hazards arising from the substance or mixture:** None known.
- **5.3 Advice to firefighters:** None.

Section 6: Accidental Release Measures

- **6.1 Personal precautions:** Wear dust-mask or respirator if airborne concentrations approach or exceed exposure limits detailed in Section 8.
- **6.2 Environmental precautions:** Carefully clean up spilled material and place the material into suitable containers and hold for reuse or disposal. Dispose of the waste material in accordance with local regulations.
- **6.3 Methods and materials for containment and cleaning up:** Shovel material. Avoid sweeping to limit dried airborne dust.
- **6.4 Reference to other sections:** Use information obtained throughout this SDS to be fully prepared in case of accidental release.

Section 7: Handling and Storage

- **7.1 Precautions for safe handling:** Avoid excessive dust formation and breathing dust. Persons handling the product should wear recommended personal protective equipment (PPE) as noted in Section 8. Wash thoroughly with potable water and mild soap after handling. Use outdoors or provide ventilation.
- **7.2 Conditions for safe storage, including any incompatibilities:** Store at ambient temperatures. Clean up by shovel, wet sweeping and/or vacuuming.
- 7.3 Specific end uses: See Section 1. for intended uses.



Prepared to comply with GHS (Globally Harmonized System) and OSHA-Hazard Communication Standard 29 CFR.1910.1200, System of Classifying and Labeling of Chemicals

Material Name: Peat

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters: Note the limits shown below are for guidance only. Follow applicable regulations in your jurisdiction.

Substance Name	Source	Exposure Limit
Total Dust (or Particulates Not	ACGIH	10 mg/m³ (I) / 3 mg/m³ (R)
Otherwise Classified)	OSHA	15 mg/m³ (T) / 5 mg/m³ (R)
	NIOSH	10 mg/m³ (T) / 5 mg/m³ (R)

- **8.1.1 Currently recommended monitoring procedures:** No recommendations.
- 8.1.2 Exposure guidelines for air contaminants, if any: See Section 8.1
- 8.1.3 DNELS and PNECS for exposure scenarios: Information not available at this time.
- **8.1.4 Control banding for risk management:** Use good industrial hygiene practice, wear appropriate PPE and use only in well ventilated places.
- **8.2 Exposure Controls:**
- **8.2.1 Appropriate engineering controls:** If used in an enclosed area, provide adequate local exhaust ventilation when possible to remove and prevent buildup of any dusts generated from the handling of this product. Water suppression may also be used to limit airborne dusts from dried product during application or use.
- 8.2.2 Individual protection methods: Use good industrial hygiene practices in handling this material. Eye wash stations should be available. Wash exposed skin with potable water and mild soap after use. If any irritation or redness is noted, treat symptomatically or consult a doctor immediately. Wear gloves, safety glasses/goggles and protective clothing. In case of eye contact, flush with plenty of clean, potable water for at least 15 minutes. Remove contacts if easy to do so. Seek medical attention if irritation occurs. Avoid dust inhalation and direct contact with skin and eyes. Wash contaminated skin before eating, drinking or smoking.

8.2.3 Personal Protective Equipment:

<u>Eye/Face:</u> Use appropriate eye protection: glasses with side shields or goggles.

<u>Skin:</u> Avoid contact by covering skin with protective clothing. Wear gloves when handling the product. Wear eye protection. Wash exposed skin thoroughly with potable water and mild soap.

<u>Respiratory:</u> If airborne concentrations are above the applicable exposure limits, use NIOSH-approved respirator if qualified.

Issue Date: 06/29/16 | Revision 2.0



Prepared to comply with GHS (Globally Harmonized System) and OSHA-Hazard Communication Standard 29 CFR.1910.1200, System of Classifying and Labeling of Chemicals

Material Name: Peat

Section 9: Physical and Chemical Properties

Physical State:Color:

Combined blend of material Varying brown/black shades

Odor: Earthy

Odor Threshold:

Melting Point:

Freezing Point:

Initial Boiling Point:

Flammability (solid, gas):

Lower and Upper Explosion

Not applicable

Not applicable

Not applicable

Not applicable

Limits/Flammability Limit:

Flash Point: Non-flammable
Auto-Ignition Temperature: Not applicable
Decomposition Temperature: Not evaluated

pH: 5 - 7

Kinematic Viscosity:

Solubility:

Partition Coefficient:

Vapor Pressure

Density (and/or Relative Density):

Relative Vapor Density:

Particle Characteristics:

Not applicable
Not applicable
Not evaluated
Not applicable
Variable sizes

Section 10: Stability and Reactivity

10.1 Reactivity: None known.

- **10.2 Chemical stability:** Stable under normal conditions of storage and use.
- 10.3 Possibility of hazardous reactions: Avoid contact with powerful oxidizing agents.
- **10.4 Conditions to avoid:** Avoid dust concentrations above permissible exposure limits.
- **10.5 Incompatible materials:** Incompatible materials and possible hazardous reactions are detailed in Section 10.3.
- **10.6 Hazardous decomposition or byproducts:** Highly improbable. Hazardous polymerization will not occur.

Section 11: Toxicological Information

11.1 Information on toxicological effects:

Acute Exposure and Symptoms:

<u>Inhalation:</u> May cause irritation of the respiratory system.

Skin Contact: May cause irritation.

Eye Contact: May cause irritation, abrasions, redness, and permanent eye damage.

Ingestion: Ingestion of large amounts may cause gastrointestinal irritation, choking/blockage.

Chronic Exposure:

Prolonged exposure to dust may cause irritation to the respiratory tract, inflame or sensitize the nose, throat and lungs resulting in illnesses such as asthma or pneumonia.

Numerical Measures of Toxicity

There no numerical measurers of toxicity available for the product at this time.



Prepared to comply with GHS (Globally Harmonized System) and OSHA-Hazard Communication Standard 29 CFR.1910.1200, System of Classifying and Labeling of Chemicals

Material Name: Peat

Section 11: Toxicological Information

Component Carcinogenicity

This product is not a known or suspected carcinogen.

Specific Target Organ Toxicity Single/Repeat Exposure – Respiratory System

Repeated inhalation of dusts can lead to irritation of the respiratory tract, inflame or sensitize the nose, throat and lungs resulting in illnesses such as asthma or pneumonia. Exposure to dust may occur with agitation of the product if the product is dry.

Skin Sensitizer

Not expected to be a skin sensitizer.

Section 12: Ecological Information (non-mandatory)

12.1 Ecotoxicity:

General Product Information: Product when used as intended is not hazardous to the environment.

Component Analysis - Ecotoxicity : Ecotoxicity data are not available for this product's.

Environmental Fate: No information available for the product.

Section 13: Disposal Considerations (non-mandatory)

13.1 Waste treatment methods:

General Product Information: Whatever cannot be saved or recovered for recycling should be disposed of according to state and local regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14: Transport Information (non-mandatory)

Product is not classified as Dangerous Goods.

Section 15: Regulatory Information (non-mandatory)

15.1 Safety, health, and environmental regulation:

US Federal Regulations

General Product Information: No component is listed on the U.S. EPA TSCA Inventory List. **Component Analysis:** Components of this product are not listed as hazardous under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

General Product Information: Other state regulations may apply. Check individual state requirements.

California Prop. 65 Components: This product contains no chemicals known to the State of California to cause cancer or reproductive toxicity.



Prepared to comply with GHS (Globally Harmonized System) and OSHA-Hazard Communication Standard 29 CFR.1910.1200, System of Classifying and Labeling of Chemicals

Material Name: Peat

Section 15: Regulatory Information (non-mandatory)

Section 16: Other Information

Other Information

Disclaimer: Supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Safety Data Sheet before handling product.

Key to Abbreviations and Acronyms:

ACGIH: American Conference of Governmental Industrial Hygienists

DNEL: Derived No Effect Level

EINECS: European Inventory of Existing Commercial Chemical Substances

EPA: Environmental Protection Agency

EU: European Union

GHS Globally Harmonized System of classification and labelling of chemicals

IARC: International Agency for Research on Cancer

I: Inhalable Particles

LC50: Lethal concentration in air fatal to 50 percent of test animals LD50: Lethal dose by mouth or other route to 50 percent of test animals

LDLo: Lowest lethal dose

NIOSH: National Institute for Occupational Safety and Health

NJTSR: New Jersey Trade Secret Registry NOEC: No Observed Effect Concentration NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration (USA)

PNEC: Predicted No Effect Concentration
PNOC: Particulates Not Otherwise Classified

PPM: Parts Per Million R: Respirable Particles

STEL: Short Term Exposure Limit

T: Total Dust

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act TWA: Time weighted average

** This is the end of SDS - Peat **

Issue Date: 06/29/16 | Revision 2.0

Page 6 of 6

Chemical Product and Company Identification Section 1

665 Carbon Street Billings, MT 59102 800-860-6272

www.homesciencetools.com

CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300

1 703-741-5500 (from anywhere in the world).

For laboratory and industrial use only. Not for drug, food or household use.

ACETONE Product

Synonyms 2-Propanone / Dimethyl Ketone / Solvent

Section 2 **Hazards Identification**

Signal word: DANGER Pictograms: GHS02 / GHS07

Target organs: Central nervous system

HOME SCIENCE TOOLS





GHS Classification:

Flammable liquid (Category 2) Eye irritation (Category 2A) STOT-SE (Category 3)

GHS Label information: Hazard statement:

H225: Highly flammable liquid and vapour.

H319: Causes serious eye irritation.

H336: May cause drowsiness or dizziness.

Supplemental information:

Repeated exposure may cause skin dryness or cracking.

Precautionary statement:

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P261: Avoid breathing mist/vapours/spray. P264: Wash hands thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/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 attention.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing

P312: Call a POISON CENTER or doctor if you feel unwell.

P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405+P235: Store locked up. Keep cool.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients						
Chemical Name	CAS#	%	EINECS			
Acetone	67-64-1	100%	200-662-2			

Section 4 First Aid Measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SEVERE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: REPEATED OR PROLONGED CONTACT MAY CAUSE DRYING AND DEFATTING OF SKIN. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Acetone is extremely flammable and its vapors form explosive mixtures with air. Dangerous when exposed to heat, sparks, flame or oxidizing agents.

Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Page E1 of E2

Page E2 of E2 Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8	n 8 Exposure Controls / Personal Protection						
Evnocuro Limite:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits:	Acetone	TWA: 500 ppm; STEL: 750 ppm	TWA: 1000 ppm / 2400 mg/m ³	TWA: 250 ppm / 590 mg/m ³			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Partition coefficient: (n-octanol / water): Log Pow: -.24

Auto-ignition temperature: 465°C (869°F)

Viscosity: Data not available. Molecular formula: CH3COCH3

Molecular weight: 58.08

Decomposition temperature: Data not available.

Evaporation rate (Butyl acetate = 1): 7.7

Relative density (Specific gravity): 0.8

Vapor pressure (mm Hg): 180

Solubility(ies): Soluble in water.

Vapor density (Air = 1): 2.00

Flammability (solid/gas): Data not available.

Explosion limits: Lower / Upper: 2.5% / 12.8%

Physical & Chemical Properties Section 9

Appearance: Clear, colorless liquid. Odor: Pungent odor. Odor threshold: Data not available

pH: Data not available

Melting / Freezing point: Approximately 95°C (139°F) Boiling point: 56°C (133°F) Flash point: -20°C (-4°F) CC

Section 10 Stability & Reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Chloroform, chromic anhydride, hydrogen peroxide, nitric compounds, acids, strong oxidizers, alkalies

Hazardous decomposition products: Oxides of carbon.

Section 11 **Toxicological Information**

Acute toxicity: Oral-rat LD50: 5,800 mg/kg; Inhalation-rat LC50: 76 mg/L/4 hours

Skin corrosion/irritation: Skin-rabbit - Slight irritant. Serious eye damage/irritation: Eyes-rabbit - Severe irritant. Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available

STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation may cause cough, sore throat, confusion, headache, dizziness, drowsiness, unconsciousness.

Ingestion: Ingestion causes nausea, vomiting, and other symptoms same as inhalation. Skin: Contact with skin causes irritation, dry and/or defatting on prolonged contact.

Eves: Contact with eves causes redness, pain and blurred vision.

Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: AL3150000

Section 12 **Ecological Information**

Toxicity to fish: Gambusia affinis (fish, fresh water), LC50 = 13,000 mg/L/48 hours

Toxicity to daphnia and other aquatic invertebrates: Daphnia cucullata (Crustacea), EC50 = ca. 7,635 mg/L/48 hours

Toxicity to algae: Anabaena inaequalis (Algae), EC50 = 21,725 mg/L/14 days

Persistence and degradability: No data available Bioaccumulative potential: No data available Mobility in soil: No data available PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN1090 Shipping name: Acetone

Reportable Quantity: 5,000 lbs (2270 kg) Hazard class: 3 Packing group: || Marine pollutant: No

2016 ERG Guide # 127 **Exceptions:** Limited quantity equal to or less than 1 L

Section 15 **Regulatory Information**

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Acetone	Listed	5,000 lbs (2270 kg)	U002	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook

Revision Date: January 23, 2018 Supercedes: December 27, 2016 Form 06/2015

Page E1 of E2

Section 1 Chemical Product and Company Identification

HOME SCIENCE TOOLS

665 Carbon Street Billings, MT 59102 800-860-6272 www.homesciencetools.com CHEMTREC 24 Hour Emergency USA Phone Number (800) 424-9300 1 703-741-5500 (from anywhere in the world).

For laboratory and industrial use only.

Not for drug, food or household use.

Product ACETIC ACID, GLACIAL

Synonyms Ethanoic Acid / Methanecarboxylic Acid / Glacial Acetic Acid

Section 2 Hazards Identification

Signal word: DANGER **Pictograms:** GHS02 / GHS05

Target organs: Respiratory system, Eyes, Skin, Teeth



GHS Classification:

Flammable liquid (Category 3) Skin corrosion (Category 1A) Eye damage (Category 1)

GHS Label information: Hazard statement:

H226: Flammable liquid and vapour.

H314: Causes severe skin burns and eye damage.

Precautionary statement:

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking

P233: Keep container tightly closed.

P241: Use explosion-proof electrical/ventilating/lighting equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P260: Do not breathe mist/vapours/spray. P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363: Wash contaminated clothing before reuse.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310: Immediately call a POISON CENTER or doctor.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water spray to extinguish.

P403+P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients						
Chemical Name		CAS#	%	EINECS		
Acetic acid		64-19-7	99.8%	200-580-7		

Section 4 First Aid Measures

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE CORNEAL BURNS. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION AND/OR BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This chemical reacts violently with strong oxidizers, generating a fire and explosion hazard. Reacts violently with strong bases, strong acids and many other compounds.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage Page E2 of E2

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8	Exposure Controls / Personal Protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits.	Acetic acid	TWA: 25 mg/m ³ STEL: 37 mg/m ³	TWA: 25 mg/m ³	TWA: 25 mg/m ³ STEL: 37 mg/m ³			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Clear, colorless liquid. Odor: Strong, acrid, vinegar-like odor. Odor threshold: Data not available.

pH: <2

Melting / Freezing point: 16.7°C (62°F)

Boiling point: 118.1°C (244°F)

Flash point: 39°C (102.2°F) TCC ASTM D 56

Evaporation rate (Butyl acetate = 1): 0.97 Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: 4.0% / 19.9% Vapor pressure (mm Hg): 11.4 @ 20°C

Vapor density (Air = 1): 2.07

Relative density (Specific gravity): 1.049 @ 20/4°C

Solubility(ies): Soluble in water.

Partition coefficient: Data not available
Auto-ignition temperature: 464°C (869°F)
Decomposition temperature: Data not available.
Viscosity: Data not available.

Molecular formula: CH₃COOH Molecular weight: 60.05

Section 10 Stability & Reactivity

Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Bases, strong oxidizers, chromic acid, nitric acid, sodium peroxide, carbonates, hydroxides, phosphates. Corrosive to some metals. Potentially violent reaction with acetaldehyde and acetic anhydride. Ignites on contact with potassium-tert-botoxide.

Hazardous decomposition products: Carbon monoxide, hydrogen sulfide and other harmful gases or vapors including oxides and/or other compounds of sulfur and sodium.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 3,310 mg/kg; Inhalation-rat LC50: 11.4 mg/L/4 hours; Dermal-rabbit LD50: 1,060 mg/kg

Skin corrosion/irritation: Skin-rabbit - Severe irritant.
Serious eye damage/irritation: Eyes-rabbit - Severe irritant.
Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available

Potential health effects:

Inhalation: Exposure to vapor may cause irritation of the eyes, nose, and respiratory tract. May cause asthma-like symptoms, including coughing, wheezing, tightness of chest, shortness of breath, and headache.

Ingestion: May cause burns of the mouth, throat, esophagus, and stomach. Signs and symptoms may include pain, nausea, vomiting, diarrhea, dizziness, drowsiness,

faintness, weakness, collapse and coma.

Skin: Contact with skin causes pain, redness, burns, and blisters.

Eyes: Contact with eyes may cause redness, pain, corneal burns, and loss of vision.

Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: AF1225000 Section 12 Ecological Information

Toxicity to fish: Gambusia affinis (fish, fresh water), LC50 = 251 mg/L/24 hours

Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 95 mg/L/24 hours

Toxicity to algae: Euglena gracilis (Algae), EC100 = 720 mg/L

Persistence and degradability: Easily biodegradable Bioaccumulative potential: Not expected to bioaccumulate

Mobility in soil: No data available PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN2789 Shipping name: Acetic acid, glacial

Hazard class: 8, (3) Packing group: II Reportable Quantity: 5,000 lbs (2270 kg) Marine pollutant: No

Exceptions: Limited quantity equal to or less than 1 L 2016 ERG Guide # 132

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list

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Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65	
Acetic acid, glacial	Listed	5,000 lbs (2270 kg)	D001, D002	Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or	
	1	1				reproductive toxicity	

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Form 06/2015 Revision Date: January 22, 2018 Supercedes: October 17, 2016