



We Measure the World

2365 NE Hopkins Court  
Pullman, Washington 99163  
phone 509-332-2756  
website www.decagon.com

## Safety Data Sheet

### 13.41 mol/kg Lithium Chloride

### 13021

#### I - PRODUCT AND COMPANY IDENTIFICATION

**Company:** Decagon Devices, Inc.  
2365 NE Hopkins Court  
Pullman, WA 99163 USA  
509-332-2756

**Formula:** Lithium Chloride  
**Concentration:** 13.41 mol/kg; 36.24%  
**Component:** LiCl in H<sub>2</sub>O

**TSCA:** YES  
**STEL:** N/A

**TLV/TWA:** Not Established  
**PEL:** N/A

**Toxicity:** N/A

#### II - HAZARD IDENTIFICATION

This product is harmful if swallowed, as classified by Acute Toxicity - Oral.

**NFPA Ratings:** Health: 2    Flammability: 0    Reactivity: 0



#### III - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS Number</u>
Lithium chloride	7447-41-8
Distilled Water	7732-18-5

#### IV- EMERGENCY FIRST AID PROCEDURES

##### CALL A PHYSICIAN

**Inhalation:** If uncomfortable, remove person to fresh air and keep at rest position.

**Skin Contact:** Wash exposed areas immediately with plenty of water.

**Eye Contact:** Irrigate with plenty of water. Remove contact lenses, if any and easy to do, continue rinsing.

**Ingestion:** Do not induce vomiting. Rinse mouth with plenty of water. Never give anything by mouth to an unconscious person.

#### V - FIRE FIGHTING MEASURES

**Extinguishing Media:** Use appropriate extinguishing media measures to local circumstances and surrounding environment.

**Special Fire-Fighting Procedures:** Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face-piece operated in positive mode.

**Auto Ignition Temperature:** N/A

**Lower Explosion Level:** N/A

**NFPA Rating:** N/A

**Toxic Gases Produced:** N/A

**Unusual Fires Explosion Hazards:** N/A



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## VI - ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Ensure adequate ventilation, especially in confined areas. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe to areas. Use personal protective equipment. See Section 8 for recommended personal protection..

**Environmental Precautions:** Prevent contamination of waterways, drains, or soils. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.

**In Case of Spillage or Discharge:** Prevent further leakage and spillage if safe to do so. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**Disposal of Spillage and Waste:** Follow Federal, State, and Local regulations for waste.

**EPA Hazardous Waste #:** N/A.

## VII - HANDLING AND STORAGE

**Handling:** Observe good industrial hygiene practices.

**Storage:** Store in closed original bottle. Keep in a cool dry place.

## VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

**Ventilation:** Local Exhaust.

**Respiratory Protection:** Respiratory protection not required. For nuisance exposures, use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Personal protection:** If there is a risk of splashing, use goggles with side shields. Use proper protective gloves and avoid contact with skin and eyes.

**Other:** Lab coat/apron; vent hood.

## IX - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Colorless liquid
<b>Odor:</b>	Odorless
<b>pH:</b>	N/A
<b>Molecular Weight:</b>	42.39
<b>Boiling Point:</b>	N/A
<b>Vapor Pressure:</b>	N/A
<b>Vapor Density:</b>	N/A
<b>Freezing Point:</b>	N/A
<b>Specific Gravity (H<sub>2</sub>O=1):</b>	N/A
<b>Solubility:</b>	Complete
<b>Flash point:</b>	N/A

## X - STABILITY AND REACTIVITY

**Stable:** Stable under normal storage and handling conditions.

**Conditions to Avoid:** Heating, incompatible materials, and some metals.

**Materials to Avoid:** Strong oxidizing agents, strong acids.

**Hazardous Decomposition Products:** Thermal decomposition can lead to release of irritating fumes and toxic gases. Hydrogen Chloride, Oxides of Lithium.

**Possibility of Hazardous Reactions:** Can react quickly with oxidizers.

**Polymerization:** Hazardous polymerization does not occur.

**Corrosivity:** Corrosive to some metals.

## XI - TOXICOLOGICAL INFORMATION

**Inhalation:** May cause respiratory tract irritation. Ensure supply of fresh air.

**Skin Contact:** Possible skin irritation.

**Eye Contact:** Splashes in the eyes may cause irritation, redness and pain. Rinse immediately with plenty of water.

**Ingestion:** May cause drowsiness or dizziness. Ingestion may cause irritation and burns of the upper digestive tract, as well as nausea, vomiting, headache, and coughing.

**Health Warnings:** Effects may be delayed. Oral (rat) LD50: 526 mg/kg, Dermal (rat) LD50: 1488 mg/kg.

**Carcinogenicity:** NTP: No

**IARC:** No

**ZLIST:** No

**OSHA Reg:** No



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#### XII - ECOLOGICAL INFORMATION (NON-MANDATORY)

**Ecological Information:** No specific data or information available regarding environmental impact. Regarded as having acute toxicity to aquatic organisms.

**Mobility:** Soluble in water. Predicted to have high mobility in soil.

#### XIII - DISPOSAL CONSIDERATIONS (NON-MANDATORY)

**Disposal Methods:** Disposal should be in accordance with the principles of Duty of Care observing local and national regulations.

**Relevant Information:** Keep out of drains, sewers, ditches and waterways.

**Contaminated Packaging:** Empty containers must be triple rinsed prior to disposal.

#### XIV - TRANSPORT INFORMATION (NON MANDATORY)

**General:** Goods are not regulated, or not dangerous, or are not hazardous, or not restricted for transportation by IATA.

#### XV - REGULATORY INFORMATION (NON MANDATORY)

##### US FEDERAL

##### TSCA

CAS# 7732-18-5 7447-41-8 are listed on the TSCA inventory.

##### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

##### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

##### Section 12b

None of the chemicals are listed under TSCA Section 12b.

##### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

##### SARA

##### Section 302 (RQ)

None of the chemicals in this material have an RQ.

##### Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

##### SARA Codes

None

##### Section 313

No chemicals are reportable under Section 313.

##### Clean Air Act

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

##### Clean Water Act

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

##### OSHA

None of the chemicals in this product are considered highly hazardous by OSHA.

##### STATE

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.



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#### EUROPEAN/INTERNATIONAL

European Labeling in Accordance with EC Directives

**Hazard Symbols:** GHS Health Pictogram.

**Risk Phrases:** None.

**Safety Phrases:** None.

**WGK (Water Danger/Protection)**

CAS# 7732-18-5 and 7447-41-8

#### Canada

CAS# 7732-18-5 and 7447-41-8 are listed on Canada's DSL List.

CAS# 7732-18-5 and 7447-41-8 are not listed on Canada's Ingredient Disclosure Lis

#### XVI - OTHER INFORMATION

**Information Sources:** Product classified according to CHIP3 regulations. (The Chemicals Hazard Information and Packaging for Supply Regulations 2002)

#### NOTICE

The foregoing data has been compiled for safety information only and does not form part of any selling specification. Information contained in this Data Sheet is to the best of Decagon's knowledge correct at the time of publication. Customers should always satisfy for themselves that their product is entirely suitable for their purpose under their conditions of use and in compliance with current regulations. For any further information, please contact the supplier.

PREPARED BY: NATHAN ROBERTS  
ISSUED BY: DECAGON DEVICES, INC.  
DATE: 4/14/16 11:37 AM  
13170

## Safety Data Sheet

### 8.57 mol/kg Lithium Chloride

### 13022

#### I - PRODUCT AND COMPANY IDENTIFICATION

**Company:** Decagon Devices, Inc.  
2365 NE Hopkins Court  
Pullman, WA 99163 USA  
509-332-2756

**Formula:** Lithium Chloride

**Concentration:** 8.57 mol/kg; 26.65%

**Component:** LiCl in H<sub>2</sub>O

**TSCA:** YES  
**STEL:** N/A

**TLV/TWA:** Not Established  
**PEL:** N/A

**Toxicity:** N/A

#### II - HAZARD IDENTIFICATION

This product is harmful if swallowed, as classified by Acute Toxicity - Oral.

**NFPA Ratings:** Health: 2 Flammability: 0 Reactivity: 0



#### III - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS Number</u>
Lithium chloride	7447-41-8
Distilled Water	7732-18-5

#### IV- EMERGENCY FIRST AID PROCEDURES

##### CALL A PHYSICIAN

**Inhalation:** If uncomfortable, remove person to fresh air and keep at rest position.

**Skin Contact:** Wash exposed areas immediately with plenty of water.

**Eye Contact:** Irrigate with plenty of water. Remove contact lenses, if any and easy to do, continue rinsing.

**Ingestion:** Do not induce vomiting. Rinse mouth with plenty of water. Never give anything by mouth to an unconscious person.

#### V - FIRE FIGHTING MEASURES

**Extinguishing Media:** Use appropriate extinguishing media measures to local circumstances and surrounding environment.

**Special Fire-Fighting Procedures:** Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face-piece operated in positive mode.

**Auto Ignition Temperature:** N/A

**Lower Explosion Level:** N/A

**NFPA Rating:** N/A

**Toxic Gases Produced:** N/A

**Unusual Fires Explosion Hazards:** N/A



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## VI - ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Ensure adequate ventilation, especially in confined areas. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe to areas. Use personal protective equipment. See Section 8 for recommended personal protection..

**Environmental Precautions:** Prevent contamination of waterways, drains, or soils. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.

**In Case of Spillage or Discharge:** Prevent further leakage and spillage if safe to do so. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**Disposal of Spillage and Waste:** Follow Federal, State, and Local regulations for waste.

**EPA Hazardous Waste #:** N/A.

## VII - HANDLING AND STORAGE

**Handling:** Observe good industrial hygiene practices.

**Storage:** Store in closed original bottle. Keep in a cool dry place.

## VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

**Ventilation:** Local Exhaust.

**Respiratory Protection:** Respiratory protection not required. For nuisance exposures, use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Personal protection:** If there is a risk of splashing, use goggles with side shields. Use proper protective gloves and avoid contact with skin and eyes.

**Other:** Lab coat/apron; vent hood.

## IX - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Colorless liquid
<b>Odor:</b>	Odorless
<b>pH:</b>	N/A
<b>Molecular Weight:</b>	42.39
<b>Boiling Point:</b>	N/A
<b>Vapor Pressure:</b>	N/A
<b>Vapor Density:</b>	N/A
<b>Freezing Point:</b>	N/A
<b>Specific Gravity (H<sub>2</sub>O=1):</b>	N/A
<b>Solubility:</b>	Complete
<b>Flash point:</b>	N/A

## X - STABILITY AND REACTIVITY

**Stable:** Stable under normal storage and handling conditions.

**Conditions to Avoid:** Heating, incompatible materials, and some metals.

**Materials to Avoid:** Strong oxidizing agents, strong acids.

**Hazardous Decomposition Products:** Thermal decomposition can lead to release of irritating fumes and toxic gases. Hydrogen Chloride, Oxides of Lithium.

**Possibility of Hazardous Reactions:** Can react quickly with oxidizers.

**Polymerization:** Hazardous polymerization does not occur.

**Corrosivity:** Corrosive to some metals.

## XI - TOXICOLOGICAL INFORMATION

**Inhalation:** May cause respiratory tract irritation. Ensure supply of fresh air.

**Skin Contact:** Possible skin irritation.

**Eye Contact:** Splashes in the eyes may cause irritation, redness and pain. Rinse immediately with plenty of water.

**Ingestion:** May cause drowsiness or dizziness. Ingestion may cause irritation and burns of the upper digestive tract, as well as nausea, vomiting, headache, and coughing.

**Health Warnings:** Effects may be delayed. Oral (rat) LD50: 526 mg/kg, Dermal (rat) LD50: 1488 mg/kg.

**Carcinogenicity:** NTP: No

**IARC:** No

**ZLIST:** No

**OSHA Reg:** No



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#### XII - ECOLOGICAL INFORMATION (NON-MANDATORY)

**Ecological Information:** No specific data or information available regarding environmental impact. Regarded as having acute toxicity to aquatic organisms.

**Mobility:** Soluble in water. Predicted to have high mobility in soil.

#### XIII - DISPOSAL CONSIDERATIONS (NON-MANDATORY)

**Disposal Methods:** Disposal should be in accordance with the principles of Duty of Care observing local and national regulations.

**Relevant Information:** Keep out of drains, sewers, ditches and waterways.

**Contaminated Packaging:** Empty containers must be triple rinsed prior to disposal.

#### XIV - TRANSPORT INFORMATION (NON MANDATORY)

**General:** Goods are not regulated, or not dangerous, or are not hazardous, or not restricted for transportation by IATA.

#### XV - REGULATORY INFORMATION (NON MANDATORY)

##### US FEDERAL

##### TSCA

CAS# 7732-18-5 7447-41-8 are listed on the TSCA inventory.

##### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

##### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

##### Section 12b

None of the chemicals are listed under TSCA Section 12b.

##### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

##### SARA

##### Section 302 (RQ)

None of the chemicals in this material have an RQ.

##### Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

##### SARA Codes

None

##### Section 313

No chemicals are reportable under Section 313.

##### Clean Air Act

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

##### Clean Water Act

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

##### OSHA

None of the chemicals in this product are considered highly hazardous by OSHA.

##### STATE

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.



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#### EUROPEAN/INTERNATIONAL

European Labeling in Accordance with EC Directives

**Hazard Symbols:** GHS Health Pictogram.

**Risk Phrases:** None.

**Safety Phrases:** None.

**WGK (Water Danger/Protection)**

CAS# 7732-18-5 and 7447-41-8

#### Canada

CAS# 7732-18-5 and 7447-41-8 are listed on Canada's DSL List.

CAS# 7732-18-5 and 7447-41-8 are not listed on Canada's Ingredient Disclosure Lis

#### XVI - OTHER INFORMATION

**Information Sources:** Product classified according to CHIP3 regulations. (The Chemicals Hazard Information and Packaging for Supply Regulations 2002)

#### NOTICE

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PREPARED BY: NATHAN ROBERTS  
ISSUED BY: DECAGON DEVICES, INC.  
DATE: 4/14/16 11:37 AM  
13169





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2365 NE Hopkins Court  
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phone 509-332-2756  
website www.decagon.com

## Safety Data Sheet

### 6.00 mol/kg Sodium Chloride 13023

#### I - PRODUCT AND COMPANY IDENTIFICATION

**Company:** Decagon Devices, Inc.  
2365 NE Hopkins Court  
Pullman, WA 99163 USA  
509-332-2756

**Formula:** Sodium Chloride  
**Concentration:** 6.00 mol/kg; 25.96%  
**Component:** NaCl in H<sub>2</sub>O

**TSCA:** YES  
**STEL:** N/A

**TLV/TWA:** Not Established  
**PEL:** N/A

**Toxicity:** N/A

#### II - HAZARD IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Prudent laboratory practices should still be observed.

**NFPA Ratings:** Health: 1 Flammability: 0 Reactivity: 0

#### III - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS Number</u>
Sodium chloride	7647-14-5
Distilled Water	7732-18-5

#### IV - EMERGENCY FIRST AID PROCEDURES

##### CALL A PHYSICIAN

**Inhalation:** If uncomfortable, remove person to fresh air and keep at rest position.

**Skin Contact:** Wash exposed areas with plenty of water.

**Eye Contact:** Irrigate with plenty of water. Remove contact lenses, if any and easy to do so. Continue rinsing..

**Ingestion:** Do not induce vomiting. Rinse mouth with plenty of water. Never give anything by mouth to an unconscious person.

#### V - FIRE-FIGHTING MEASURES

**Extinguishing Media:** Use appropriate extinguishing media measures to local circumstances and surround environment.

**Special Fire-Fighting Procedures:** Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face-piece operated in positive mode.

**Auto Ignition Temperature:** N/A

**Lower Explosion Level:** N/A

**NFPA Rating:** N/A

**Toxic Gases Produced:** N/A

**Unusual Fires Explosion Hazards:** N/A

#### VI - ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Use Personal Protective Equipment.

**Environmental Precautions:** Contain spill. Prevent contamination of soil, drains and surface water.

**In Case of Spillage or Discharge:** Soak up with inert absorbent material. Keep in suitable closed containers for disposal.

**Disposal of Spillage and Waste:** Follow Federal, State, and Local regulations for waste.

**EPA Hazardous Waste #:** N/A.



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## VII - HANDLING AND STORAGE

**Handling:** Observe good industrial hygiene practices. Use in well-ventilated areas.

**Storage:** Store in closed original container. Keep container tightly closed. Store in cool and dry place.

## VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

**Ventilation:** Local Exhaust.

**Respiratory Protection:** Respiratory protection not required. For nuisance exposures, use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Personal Protection:** If there is a risk of splashing, use goggles with side shields. Use proper protective gloves

**Other:** Lab coat/apron.

## IX - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Colorless liquid
<b>Odor:</b>	Odorless
<b>pH:</b>	N/A
<b>Molecular Weight:</b>	58.44
<b>Boiling Point:</b>	N/A
<b>Vapor Pressure:</b>	N/A
<b>Vapor Density:</b>	N/A
<b>Freezing Point:</b>	N/A
<b>Specific Gravity (H<sub>2</sub>O=1):</b>	N/A
<b>Solubility in Water:</b>	Complete
<b>Flash Point:</b>	N/A

## X - STABILITY AND REACTIVITY

**Stable:** Stable under recommended storage and handling conditions.

**Conditions to Avoid:** Strong oxidizers, strong acids.

**Materials to Avoid:** Metals and Acids

**Hazardous Decomposition Products:** Hydrogen Chloride, Chlorine, Oxides of Sodium.

**Possibility of Hazardous Reactions:** No information available.

**Polymerization:** Hazardous polymerization does not occur.

**Corrosivity:** Corrodes some metals.

## XI - TOXICOLOGICAL INFORMATION

**Inhalation:** May cause respiratory tract infection. Ensure supply of fresh air.

**Skin contact:** May cause skin irritation.

**Eye contact:** Splashes in the eyes may cause irritation, redness and pain. Rinse immediately and thoroughly with plenty of water.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause gastric disturbances and electrolytic imbalance.

**Health Warnings:** Ingestion may cause disturbance of body electrolyte balance. Effects may be delayed. Oral-Rat LD50: 3000 mg/kg

**Carcinogenicity:** NTP: No

IARC: No

ZLIST: No

OSHA Reg: No

## XII - ECOLOGICAL INFORMATION (NON-MANDATORY)

**Ecological Information:** No specific data or information available regarding environmental impact. Regarded as having low toxicity to aquatic organisms.

**Mobility:** Soluble in water. Predicted to have high mobility in soil.



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### XIII - DISPOSAL CONSIDERATIONS (NON-MANDATORY)

**Disposal Methods:** Disposal should be in accordance with the principles of Duty of Care observing local and national regulations.

**Relevant Information:** Keep out of drains, sewers, ditches and waterways.

**Contaminated Packaging:** Empty containers must be triple rinsed prior to disposal.

### XIV - TRANSPORT INFORMATION (NON-MANDATORY)

**General:** Goods are not regulated, or not dangerous, or are not hazardous, or not restricted for transportation by IATA.

### XV - REGULATORY INFORMATION (NON-MANDATORY)

#### US FEDERAL

##### TSCA

CAS# 7647-14-5 and 7732-18-5 are listed on the TSCA inventory.

##### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

##### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

##### Section 12b

None of the chemicals are listed under TSCA Section 12b.

##### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

##### SARA

##### Section 302 (RQ)

None of the chemicals in this material have an RQ.

##### Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

##### SARA Codes

None

##### Section 313

No chemicals are reportable under Section 313.

##### Clean Air Act

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

##### Clean Water Act

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

##### OSHA

OSHA does not consider any of the chemicals in this product highly hazardous by OSHA.

#### STATE

CAS# 7732-18-5 and 7647-14-5 are not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

#### EUROPEAN/INTERNATIONAL

##### European Labeling in Accordance with EC Directives

**Hazard Symbols:** None.

**Risk Phrases:** None.

**Safety Phrases:** None.

##### WGK (Water Danger/Protection)

CAS# 7732-18-5 and 7647-14-5

##### Canada

CAS# 7732-18-5 or 7647-14-5 are listed on Canada's DSL List.

CAS# 7732-18-5 or 7647-14-5 are not listed on Canada's Ingredient Disclosure List.

### XVI - OTHER INFORMATION

**Information Sources:** Product classified according to CHIP3 regulations. (The Chemicals Hazard Information and Packaging for Supply Regulations 2002).



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PREPARED BY: NATHAN ROBERTS  
ISSUED BY: DECAGON DEVICES, INC.  
DATE: 4/15/16 3:34 PM  
13168



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phone 509-332-2756  
website www.decagon.com

## Safety Data Sheet

### 0.50 mol/kg Potassium Chloride

### 13020

#### I - PRODUCT AND COMPANY IDENTIFICATION

**Company:** Decagon Devices, Inc.  
2365 NE Hopkins Court  
Pullman, WA 99163 USA  
509-332-2756

**Formula:** Potassium Chloride  
**Concentration:** 0.50 mol/kg; 3.59%  
**Component:** KCl in H<sub>2</sub>O

**TSCA:** YES  
**STEL:** N/A

**TLV/TWA:** Not Established  
**PEL:** N/A

**Toxicity:** N/A

#### II - HAZARD IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Prudent laboratory practices should still be observed.

**NFPA Ratings:** Health: 1 Flammability: 0 Reactivity: 0

#### III - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS Number</u>
Potassium chloride	7447-40-7
Distilled Water	7732-18-5

#### IV - EMERGENCY FIRST AID PROCEDURES

##### CALL A PHYSICIAN

**Inhalation:** May cause irritation. If uncomfortable, remove person to fresh air and keep at rest position.

**Skin Contact:** May cause irritation. Wash exposed areas with plenty of water.

**Eye Contact:** May cause irritation. Irrigate with plenty of water. Remove contact lenses, if any and easy to do so. Continue rinsing.

**Ingestion:** May cause irritation. Do not induce vomiting, rinse mouth with water. Never give anything by mouth to an unconscious person.

#### V - FIRE-FIGHTING MEASURES

**Extinguishing Media:** Use appropriate extinguishing media measures to local circumstances and surround environment.

**Special Fire-Fighting Procedures:** Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face-piece operated in positive mode.

**Auto Ignition Temperature:** N/A

**Lower Explosion Level:** N/A

**NFPA Rating:** N/A

**Toxic Gases Produced:** N/A

**Unusual Fires Explosion Hazards:** N/A

#### VI - ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Use personal protective equipment.

**Environmental Precautions:** Contain spill. Prevent contamination of soils, drains, and surface water.

**In Case of Spillage or Discharge:** Soak up with inert absorbent material. Keep in suitable closed containers for disposal.

**Disposal of Spillages and Waste:** Follow Federal, State, and Local regulations for waste.

**EPA Hazardous Waste #:** N/A.



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2365 NE Hopkins Court  
Pullman, Washington 99163  
phone 509-332-2756  
website www.decagon.com

## VII - HANDLING AND STORAGE

**Handling:** Observe good industrial hygiene practices.

**Storage:** Store in closed original bottle. Keep container tightly closed. Store in cool, dry place.

## VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

**Ventilation:** Local Exhaust.

**Respiratory Protection:**

**Personal Protection:** If there is a risk of splashing, use goggles with side shields. Use proper protective gloves.

**Other:** Lab coat/apron.

## IX - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Colorless liquid
<b>Odor:</b>	Odorless
<b>pH:</b>	N/A
<b>Molecular Weight:</b>	74.55
<b>Boiling Point:</b>	N/A
<b>Vapor Pressure:</b>	N/A
<b>Vapor Density:</b>	N/A
<b>Freezing Point:</b>	N/A
<b>Specific Gravity (H<sub>2</sub>O=1):</b>	N/A
<b>Solubility:</b>	Complete
<b>Flash Point:</b>	N/A

## X - STABILITY AND REACTIVITY

**Stable:** Stable under recommended storage and handling conditions.

**Conditions to Avoid:** Metals and acids.

**Materials to Avoid:** Strong Oxidizing agents, acids.

**Hazardous Decomposition Products:** Hydrogen Chloride, Chlorine, Oxides of Potassium.

Irritating fumes and gases.

**Possibility of Hazardous Reactions:** No information available.

**Polymerization:** Hazardous polymerization does not occur.

**Corrosivity:** Corrodes some metals.

## XI - TOXICOLOGICAL INFORMATION

**Inhalation:** May cause respiratory tract irritation.

**Skin Contact:** May cause skin irritation.

**Eye Contact:** Causes eye irritation.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause gastric disturbances and electrolytic imbalance.

**Health Warnings:** Effects may be delayed.

**Carcinogenicity:** NTP: No

IARC: No

ZLIST: No

OSHA Reg: No

## XII - ECOLOGICAL INFORMATION (NON-MANDATORY)

**Ecological Information:** No specific data or information available regarding environmental impact. Regarded as having low toxicity to aquatic organisms.

**Mobility:** Soluble in water. Predicted to have high mobility in soil.

## XIII - DISPOSAL CONSIDERATIONS (NON-MANDATORY)

**Disposal Methods:** Disposal should be in accordance with the principles of Duty of Care observing local and national regulations.



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**Relevant Information:** Keep out of drains, sewers, ditches and waterways.

**Contaminated Packaging:** Empty containers must be triple rinsed prior to disposal.

#### XIV - TRANSPORT INFORMATION (NON-MANDATORY)

**General:** Goods are not regulated, or not dangerous, or are not hazardous, or not restricted for transportation by IATA.

#### XV - REGULATORY INFORMATION (NON-MANDATORY)

##### US FEDERAL

###### TSCA

CAS# 7447-40-7 and 7732-18-5 are listed on the TSCA inventory.

###### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

###### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

###### Section 12b

None of the chemicals are listed under TSCA Section 12b.

###### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

###### SARA

###### Section 302 (RQ)

None of the chemicals in this material have an RQ.

###### Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

###### SARA Codes

CAS # 7447-40-7: acute.

###### Section 313

No chemicals are reportable under Section 313.

###### Clean Air Act

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

###### Clean Water Act

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

###### OSHA

None of the chemicals in this product are considered highly hazardous by OSHA.

##### STATE

CAS# 7447-40-7 and 7732-18-5 are not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

##### EUROPEAN/INTERNATIONAL

###### European Labeling in Accordance with EC Directives

###### Hazard Symbols: XI

**Risk Phrases:** R 36 Irritating to eyes.

###### Safety Phrases

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 39 Wear eye/face protection.

###### WGK (Water Danger/Protection)

CAS# 7447-40-7 and 7732-18-5.

###### Canada

CAS# 7447-40-7 and 7732-18-5 are listed on Canada's DSL List. CAS# 7447-40-7 is listed on Canada's DSL List.

This product has a WHMIS classification of D2B.

CAS# 7447-40-7 and 7732-18-5 are not listed on Canada's Ingredient Disclosure List.

#### XVI - OTHER INFORMATION

**Information Sources:** Product classified according to CHIP3 regulations. (The Chemicals Hazard Information and Packaging for Supply Regulations 2002).



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#### NOTICE

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PREPARED BY: NATHAN ROBERTS  
ISSUED BY: DECAGON DEVICES, INC.  
DATE: 4/14/16 10:47 AM  
10923





We Measure the World

2365 NE Hopkins Court  
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## Safety Data Sheet

### 2.33 mol/kg Sodium Chloride

### 13845

#### I - PRODUCT AND COMPANY IDENTIFICATION

**Company:** Decagon Devices, Inc.  
2365 NE Hopkins Court  
Pullman, WA 99163 USA  
509-332-2756

**Formula:** Sodium Chloride

**Concentration:** 2.33 mol/kg; 12.00%

**Component:** NaCl in H<sub>2</sub>O

**TSCA:** YES  
**STEL:** N/A

**TLV/TWA:** Not Established  
**PEL:** N/A

**Toxicity:** N/A

#### II - HAZARD IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Prudent laboratory practices should still be observed.

**NFPA Ratings:** Health: 1 Flammability: 0 Reactivity: 0

#### III - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS Number</u>
Sodium chloride	7647-14-5
Distilled Water	7732-18-5

#### IV - EMERGENCY FIRST AID PROCEDURES

##### CALL A PHYSICIAN

**Inhalation:** If uncomfortable, remove person to fresh air and keep at rest position.

**Skin Contact:** Wash exposed areas with plenty of water.

**Eye Contact:** Irrigate with plenty of water. Remove contact lenses, if any and easy to do so. Continue rinsing..

**Ingestion:** Do not induce vomiting. Rinse mouth with plenty of water. Never give anything by mouth to an unconscious person.

#### V - FIRE FIGHTING MEASURES

**Extinguishing Media:** Use appropriate extinguishing media measures to local circumstances and surround environment.

**Special Fire-Fighting Procedures:** Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face-piece operated in positive mode.

**Auto Ignition Temperature:** N/A

**Lower Explosion Level:** N/A

**NFPA Rating:** N/A

**Toxic Gases Produced:** N/A

**Unusual Fires Explosion Hazards:** N/A

#### VI - ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Use Personal Protective Equipment.

**Environmental Precautions:** Contain spill. Prevent contamination of soil, drains and surface water.

**In Case of Spillage or Discharge:** Soak up with inert absorbent material. Keep in suitable closed containers for disposal.

**Disposal of Spillage and Waste:** Follow Federal, State, and Local regulations for waste.

**EPA Hazardous Waste #:** N/A.



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## VII - HANDLING AND STORAGE

**Handling:** Observe good industrial hygiene practices. Use in well-ventilated areas.

**Storage:** Store in closed original container. Keep container tightly closed. Store in cool and dry place.

## VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

**Ventilation:** Local Exhaust.

**Respiratory Protection:** Respiratory protection not required. For nuisance exposures, use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Personal Protection:** If there is a risk of splashing, use goggles with side shields. Use proper protective gloves

**Other:** Lab coat/apron.

## IX - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Colorless liquid
<b>Odor:</b>	Odorless
<b>pH:</b>	N/A
<b>Molecular Weight:</b>	58.44
<b>Boiling Point:</b>	N/A
<b>Vapor Pressure:</b>	N/A
<b>Vapor Density:</b>	N/A
<b>Freezing Point:</b>	N/A
<b>Specific Gravity (H<sub>2</sub>O=1):</b>	N/A
<b>Solubility in Water:</b>	Complete
<b>Flash Point:</b>	N/A

## X - STABILITY AND REACTIVITY

**Stable:** Stable under recommended storage and handling conditions.

**Conditions to Avoid:** Strong oxidizers, strong acids.

**Materials to Avoid:** Metals and Acids

**Hazardous Decomposition Products:** Hydrogen Chloride, Chlorine, Oxides of Sodium.

**Possibility of Hazardous Reactions:** No information available.

**Polymerization:** Hazardous polymerization does not occur.

**Corrosivity:** Corrodes some metals.

## XI - TOXICOLOGICAL INFORMATION

**Inhalation:** May cause respiratory tract infection. Ensure supply of fresh air.

**Skin contact:** May cause skin irritation.

**Eye contact:** Splashes in the eyes may cause irritation, redness and pain. Rinse immediately and thoroughly with plenty of water.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause gastric disturbances and electrolytic imbalance.

**Health Warnings:** Ingestion may cause disturbance of body electrolyte balance. Effects may be delayed. Oral-Rat LD50: 3000 mg/kg

**Carcinogenicity:** NTP: No

IARC: No

ZLIST: No

OSHA Reg: No

## XII - ECOLOGICAL INFORMATION (NON MANDATORY)

**Ecological Information:** No specific data or information available regarding environmental impact. Regarded as having low toxicity to aquatic organisms.

**Mobility:** Soluble in water. Predicted to have high mobility in soil.



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### XIII - DISPOSAL CONSIDERATIONS (NON MANDATORY)

**Disposal Methods:** Disposal should be in accordance with the principles of Duty of Care observing local and national regulations.

**Relevant Information:** Keep out of drains, sewers, ditches and waterways.

**Contaminated Packaging:** Empty containers must be triple rinsed prior to disposal.

### XIV - TRANSPORT INFORMATION (NON MANDATORY)

**General:** Goods are not regulated, or not dangerous, or are not hazardous, or not restricted for transportation by IATA.

### XV - REGULATORY INFORMATION (NON MANDATORY)

#### US FEDERAL

##### TSCA

CAS# 7647-14-5 and 7732-18-5 are listed on the TSCA inventory.

##### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

##### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

##### Section 12b

None of the chemicals are listed under TSCA Section 12b.

##### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

##### SARA

##### Section 302 (RQ)

None of the chemicals in this material have an RQ.

##### Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

##### SARA Codes

None

##### Section 313

No chemicals are reportable under Section 313.

##### Clean Air Act

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

##### Clean Water Act

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

##### OSHA

OSHA does not consider any of the chemicals in this product highly hazardous by OSHA.

#### STATE

CAS# 7732-18-5 and 7647-14-5 are not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

#### EUROPEAN/INTERNATIONAL

##### European Labeling in Accordance with EC Directives

**Hazard Symbols:** None.

**Risk Phrases:** None.

**Safety Phrases:** None.

##### WGK (Water Danger/Protection)

CAS# 7732-18-5 and 7647-14-5

##### Canada

CAS# 7732-18-5 or 7647-14-5 are listed on Canada's DSL List.

CAS# 7732-18-5 or 7647-14-5 are not listed on Canada's Ingredient Disclosure List.

### XVI - OTHER INFORMATION

**Information Sources:** Product classified according to CHIP3 regulations. (The Chemicals Hazard Information and Packaging for Supply Regulations 2002).



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**NOTICE**

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PREPARED BY: NATHAN ROBERTS  
ISSUED BY: DECAGON DEVICES, INC.  
DATE: 4/14/16 10:47 AM  
13880



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## Safety Data Sheet USP Purified Water 13024

### I - PRODUCT AND COMPANY IDENTIFICATION

**Company:** Decagon Devices, Inc.  
2365 NE Hopkins Court  
Pullman, WA 99163 USA  
509-332-2756

**Product Name:** USP Purified Water

**Concentration:** 100%

**Component:** Not applicable

**TSCA:** YES  
**STEL:** N/A

**TLV/TWA:** Not Established  
**PEL:** N/A

**Toxicity:** N/A

### II - HAZARD IDENTIFICATION

This product does not contain a toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40CFR372).

**NFPA Ratings:** Health: 0 Flammability: 0 Reactivity: 0

### III - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS Number</u>
USP Purified Water	7732-18-5

### IV - EMERGENCY FIRST AID PROCEDURES

#### CALL A PHYSICIAN

**Inhalation:** No emergency care anticipated.

**Skin Contact:** No emergency care anticipated.

**Eye Contact:** No emergency care anticipated.

**Ingestion:** No emergency care anticipated.

### V - FIRE-FIGHTING MEASURES

**Extinguishing Media:** Will not burn nor support fire.

**Special Fire-Fighting Procedures:** Not required.

**Auto Ignition Temperature:** N/A **Lower Explosion Level:** N/A

**NFPA Rating:** N/A

**Toxic Gases Produced:** N/A **Unusual Fires Explosion Hazards:** N/A

### VI - ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Use personal protective equipment.

**Environmental Precautions:** Not required.

**Methods for Cleaning Up:** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

**Disposal of Spillage and waste:** Follow Federal, State, and Local regulations for waste.

**EPA Hazardous Waste #:** N/A.

### VII - HANDLING AND STORAGE

**Handling:** Observe good industrial hygiene practices.

**Storage:** Store in closed original bottle. Keep container tightly closed. Store in cool and dry place.



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#### VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

**Ventilation:** Not required.  
**Respiratory Protection:** Not required.  
**Personal Protection:** Not required.  
**Other:** Not required.

#### IX - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Colorless liquid
<b>Odor:</b>	Odorless
<b>pH:</b>	7
<b>Molecular Weight:</b>	18.0
<b>Boiling Point:</b>	100 °C @ 1 atm
<b>Vapor Pressure:</b>	3.169 kPa @ 25 °C
<b>Vapor Density:</b>	N/A
<b>Freezing Point:</b>	0 °C @ 1 atm
<b>Specific Gravity (H<sub>2</sub>O=1):</b>	1
<b>Solubility:</b>	Complete
<b>Flash Point:</b>	Non-flammable

#### X - STABILITY AND REACTIVITY

**Stable:** Stable under normal conditions.  
**Conditions to Avoid:** None.  
**Incompatibles:** Strong acids and strong bases, water reactive substances.  
**Hazardous Decomposition Products:** None.  
**Possibility of Hazardous Reactions:** No information available.  
**Polymerization:** Hazardous polymerization does not occur.  
**Corrosivity:** Not corrosive.  
**Special Remarks on Corrosivity:** No information available.

#### XI - TOXICOLOGICAL INFORMATION

**Inhalation:** No emergency care anticipated.  
**Skin Contact:** No emergency care anticipated.  
**Eye Contact:** No emergency care anticipated.  
**Ingestion:** No emergency care anticipated.  
**Medical Conditions Generally Aggravated by Exposure:** None Identified.  
**Carcinogenicity:** NTP: No                      IARC: No                      ZLIST: No                      OSHA Reg: No

#### XII - ECOLOGICAL INFORMATION (NON-MANDATORY)

**Ecological Information:** No specific data or information available regarding environmental impact.  
**Mobility:** High mobility in soil.

#### XIII - DISPOSAL CONSIDERATIONS (NON-MANDATORY)

**Disposal Methods:** Disposal should be in accordance with the principles of Duty of Care observing local and national regulations.  
**Relevant Information:** Keep out of drains, sewers, ditches and waterways.  
**Contaminated Packaging:** Not applicable.

#### XIV - TRANSPORT INFORMATION (NON-MANDATORY)

**General:** Goods are not regulated, or not dangerous, or are not hazardous, or not restricted for transportation by IATA.



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## XV - REGULATORY INFORMATION (NON-MANDATORY)

### US FEDERAL

#### TSCA

CAS# 7732-18-5 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### SARA

##### Section 302 (RQ)

None of the chemicals in this material have an RQ.

##### Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

#### SARA Codes

None.

#### Section 313

No chemicals are reportable under Section 313.

#### Clean Air Act

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

#### Clean Water Act

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA

None of the chemicals in this product are considered highly hazardous by OSHA.

### STATE

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

**California No Significant Risk Level:** None of the chemicals in this product are listed.

### EUROPEAN/INTERNATIONAL

#### European Labeling in Accordance with EC Directives

**Hazard Symbols:** None.

**Risk Phrases:** None.

**Safety Phrases:** None.

#### WGK (Water Danger/Protection)

CAS# 7732-18-5

#### Canada

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

## XVI - OTHER INFORMATION

**Information Sources:** Product classified according to CHIP3 regulations. (The Chemicals Hazard Information and Packaging for Supply Regulations 2002).

## NOTICE

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PREPARED BY: NATHAN ROBERTS  
ISSUED BY: DECAGON DEVICES,  
INC. DATE: 04/14/16 10:48 AM  
10882



# W A HAMMOND DRIERITE CO., LTD.

## SAFETY DATA SHEET

### Section I Product Information

**Products:** Drierite, Regular Drierite, Non-Indicating Drierite, Commercial Drierite

**Common Name:** Calcium Sulfate

**Chemical Name:** Calcium Sulfate Anhydrous

**Applicable Drierite Stock Numbers:**

11001,11005,11025,11050,12001,12005,12025,12050,13001,13005,13025,13050,14001,  
14005,14025,14050,15001,15005,15025,15050,19045,26910,26940,31050,32050,33050,  
34020,34050,35050,39045,60011,60012,60013,60014,60016,60018,60061,61025,62020,  
63025, 64010,66025,68005,68050

**Distributor Name:** W A Hammond Drierite Co, Ltd.

**Address:** P O Box 460, Xenia, OH 45385

**Phone Number:** 937-376-2927

**Manufacturer Name:** W A Hammond Drierite Co, Ltd.

**Address:** P O Box 460, Xenia, OH 45385

**Phone Number:** 937-376-2927

**Emergency Phone:** 937-376-2927

**Recommended Use:** Desiccant, Drying Agent

### Section II Hazard Identification

**Pictogram:**



**Signal Word:** Warning

**Hazard Statement(s):** This product can release nuisance dust in handling or during use. Eye, skin, nose, throat, and upper respiratory irritation may occur with prolonged dust exposures.

**Effects of Overexposure:**

**Acute:**

**Eyes:** Direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician. Eye irritation Category 2, Subcategory 2B.

# W A HAMMOND DRIERITE CO., LTD.

## SAFETY DATA SHEET

### Section II cont.

- Skin:** However, direct, prolonged or repeated contact with the skin may cause irritation. Rubbing of this product against the skin can result in abrasions. Rinse with water until free of material to avoid abrasions, and then wash skin thoroughly with mild soap and water. May dry skin. Mild Skin Irritation Category B
- Inhalation:** Inhalation of dusts from this product may irritate the nose, throat, lungs, and upper respiratory tract. Persons exposed to large amounts of this dust may be forced to leave area because of nuisance conditions such as coughing, sneezing, and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.
- Ingestion:** Harmful if swallowed. Calcium Sulfate is non-toxic; however, ingestion of a sufficient quantity could lead to mechanical obstruction of the gut, especially the pyloric region. See Emergency and First Aid – Ingestion in Section IV.
- Chronic:** Gypsum sourced calcium sulfate displays no specific toxic properties. (Repeated Exposure: Category 2)
- Inhalation:** Prolonged and repeated exposure to respirable crystalline silica can result in lung disease (i.e. silicosis) and/or lung cancer.
- Eyes:** None known
- Skin:** None known
- Ingestion:** None Known

### Carcinogenicity:

Material	IARC	NTP	ACGIH	CAL-65
Crystalline Silica	Group 1	Group 1	A2	On Record

In 1997, IARC classified inhaled crystalline silica as carcinogenic to humans categorizing it as a Group 1 agent. In this evaluation, IARC noted that carcinogenicity was not detected in all industrial circumstances studied, and may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs. Carcinogenicity Category 2: Suspected Carcinogen. There are no known mutagenic, teratogenic, nor has reproductive effects.

# W A HAMMOND DRIERITE CO., LTD.

## SAFETY DATA SHEET

### Section III Information on Ingredients

<u>Ingredients</u>	<u>CAS Number</u>	<u>WT%</u>	<u>LC50</u>	<u>LD50</u>
Calcium Sulfate Dihydrate, Calcium Sulfate Anhydrite, or Dihydrate/Anhydrite blend.	13397-25-5	>95	2.61 mg/L [rat]	1,581 mg/kg [rat]
Silicon Dioxide (Crystalline Silica)	14808-60-7	<0.025	Not Available	Not Available
Limestone	1317-65-3	<2	Not Available	6450 mg/kg [rat]

### Section IV First Aid Measures

Eyes:	Direct contact can cause mechanical irritation of eyes including: burning, redness, itching, pain or other symptoms. Flush thoroughly with water for 15 minutes. If irritation persists, consult physician. Contact lenses should not be worn.
Skin:	Direct, prolonged or repeated contact with the skin may cause irritation. Rubbing of this product against the skin can result in abrasions. Rinse with water until free of material to avoid abrasions, and then wash skin thoroughly with mild soap and water. May dry skin, and chronic exposure could lead to dermatitis. Wash with mild soap and water. Dry skin may be treated with a commercially available hand lotion. If skin has become cracked, take appropriate action to prevent infection and promote healing.
Inhalation:	Inhalation of dusts from this product may irritate the nose, throat, lungs, and upper respiratory tract. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Prolonged and repeated exposure to respirable crystalline silica can result in lung disease (i.e. silicosis) and/or lung cancer. While other measures are usually not necessary, consult a physician if conditions warrant.
Ingestion:	Unlikely to occur, but may cause gastric disturbances if swallowed. Gypsum is non-toxic; however, ingestion of a sufficient quantity could lead to mechanical obstruction of the gut, especially the pyloric region. Get medical attention immediately.
Target Organs:	Eyes, skin and respiratory system.
Medical Conditions Which may be Aggravated:	Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema, and asthma.
Primary Routes of entry:	Inhalation, eyes and/or skin contact, ingestion.

# W A HAMMOND DRIERITE CO., LTD.

## SAFETY DATA SHEET

### Section V Fire and Explosion Hazard Data

Flash Point:	Non-combustible
Auto-Ignition:	Non applicable.
Flammable Limits:	Non applicable.
Fire Extinguishing Media:	Use extinguishing media appropriate for surrounding fire.
Special Fire-Fighting Procedures:	Wear proper personal protective equipment as listed in Section VIII.
Hazardous Combustion Products:	Decomposes to Sulfur dioxide at 1450°C/2642°F.
Explosion Hazards:	None Known.

### Section VI Accidental Release Measures

**Steps to be taken in the event of a spill or discharge:**

Remove by dry sweeping or vacuum. Avoid creating excessive dust. It is recommended that gloves and a mask be worn while cleaning the spill. If already mixed with water, scrape up and place in container. Wear appropriate protective equipment as described in Sections VII and VIII.

**Disposal Procedures:**

Dispose of material in accordance with all applicable federal, state and local regulations. Can be disposed as an inert solid in a landfill. Slurry may plug drains.

### Section VII Handling and Storage

**Handling:** Avoid contact with skin and eyes. Do not breathe dust. Use only in well ventilated areas. Wear appropriate eye and respiratory protection, including a NIOSH approved dust mask, if dust is generated. When using, do not eat or drink. Wash hands before eating, drinking or smoking.

**Storage:** Keep out reach of children. Keep the container tightly closed and dry. Store in a covered, dry climate controlled area, away from incompatibles listed in Section X.

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### Section VIII Exposure Control

Material	WT (%)	OSHA PEL * (mg/m3)	ACGIH TLV*
Gypsum, Anhydrite or Gypsum/Anhydrite Blend	60-95	15(T)/5 (R)	10
Crystalline Silica	<0.025	0.1 (R)	0.025 (R)
Limestone	0-15	15(T)/5 (R)	10

\*(T)- Total (R) – Respirable

Note: All ingredients of this product are included in (i) the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory and (ii) in the Canadian Domestic Substances List or the Canadian Non-Domestic Substances List.

When using product, provide local and general exhaust ventilation to keep airborne dust concentrations below exposure limits.

No TLV assigned to this mixture (see Section III). Minimize exposures in accordance with good hygiene practice.

**Engineering controls:** Ventilate to keep exposures below TLV requirements of the individual ingredients. General ventilation is expected to be satisfactory, Use local exhaust ventilation if necessary to control dust.

**Respiratory Protection:** None required where adequate ventilation conditions exist. In order to meet TLV requirements of individual ingredients and to control dusting conditions, provide general ventilation and local exhaust ventilation. Avoid creating dust. Wear a NIOSH/MSHA approved dust respirator in poorly ventilated areas and/or if TLV requirements of the individual ingredients is exceeded.

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### Section IX Physical/Chemical Characteristics

Appearance:	White
Physical State:	Powder/Solid
Melting Point:	Not Applicable
Freezing Point:	Not Applicable
Odor:	Low
Odor Threshold:	Not Determined
Flash point:	Non-Combustible
Flammability Limits:	Not Applicable
Solubility(in water) (g/100g):	0.205
Initial Boiling Point:	Not Applicable
Boiling Range:	Not Applicable
Specific Gravity:	2.32-2.41
pH:	~7
Vapor Pressure:	Not Applicable
Vapor Density:	Not Applicable
Auto-Ignition Temperature:	None
Evaporation Rate:	Not Applicable
Partition Coefficient:	Not Applicable
Viscosity:	Not Applicable
Upper Flammability Limity:	Not Determined
Lower Flammability Limit:	Not Determined
Decomposition Temp:	1,450°C/2642°F

### Section X Chemical Stability and Reactivity

<b>Conditions of reactivity:</b>	Reacts with water and produces large amounts of heat (normal condition of use).
<b>Chemical stability:</b>	Stable at normal storage conditions and temperature
<b>Conditions to Avoid:</b>	Water, high humidity, and acids.
<b>Hazardous decomposition products:</b>	May include, and are not limited to: calcium oxide, sulfur dioxide due to decomposition at 1450°C/2642°F.
<b>Hazardous Polymerization:</b>	None known.

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### Section XI Toxicological Information

**Acute effects:** The acute oral toxicity study [OECD TG 420] of calcium sulfate showed that this chemical did not cause any changes.

**Chronic Effects/  
Carcinogenicity:** Crystalline Silica: Exposures to respirable crystalline silica are not expected during the normal use of this product; however, levels must be determined by in-house workplace hygiene testing.

In 1997, IARC classified inhaled crystalline silica as carcinogenic to humans categorizing it as a Group 1 agent. In this evaluation, IARC noted that carcinogenicity was not detected in all industrial circumstances studied, and may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs. In 1992, NTP listed respirable crystalline silica among the substances "reasonably anticipated to be carcinogens".

### Section XII Ecological Information

There are no known causes from this product that would harm the Ecology. The disposal of large quantities directly into waterways would be expected to cause significant aquatic life death.

### Section XIII Disposal Considerations

**Disposal Procedure:** Dispose of material in accordance with all applicable federal, state and local regulations. Can be disposed as an inert solid in a landfill. Slurry may plug drains. Do not dispose of directly in waterways or sewers.

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### Section XIV Transport Information

<b>Department of Transportation (DOT) Requirements:</b>	This product is not regulated as a hazardous material by the United States (DOT) Transportation regulations.
<b>Canadian Transportation of Dangerous Goods:</b>	Not regulated as dangerous goods.
<b>UN#</b>	None, Not regulated as dangerous goods.
<b>UN Proper Shipping Name:</b>	Not Applicable
<b>ADNR:</b>	None.
<b>RID/ADR:</b>	Not Classified.
<b>Environmental Hazards:</b>	None.
<b>Annex II of MARPOL 73/78:</b>	Not Applicable.
<b>International Bulk Chemical code:</b>	Not Applicable.

### Section XV Regulatory Information

<b>U.S. EPA;s Toxic Substance Control Act Chemical Substance Inventory:</b>	Not Listed as reportable quantity or regulated quantity in SARA Title III Sections 302, 304, and 313, CAA Section 112(r) Regulated Chemicals for Accidental Release Prevention, CERCLA Hazardous Substances, and RCRA Hazardous Waste.
<b>Canadian Controlled Product Regulations:</b>	Crystalline Silica: IDL* Item #1406 Classification: D2A Limestone: WHMIS** Classification: D2A
<b>European Union Directive 67/548/EEC (Annex III and IV):</b>	R36, R37, R38, S37, S38, S39, and S51

\*IDL Item: Canadian Hazardous Product Act Ingredient Disclosure List

\*\* WHMIS: Workplace a Hazardous Safety Information System



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### Section XVI Other Information



**Precautionary Labeling:** Warning: This product can release nuisance dust in handling or during use. Eye, skin, nose, throat, and upper respiratory irritation may occur with prolonged dust exposures. Direct, prolonged or repeated contact with the skin may cause irritation. Rubbing of this product against the skin can result in abrasions. Rinse with water until free of material to avoid abrasions, and then wash skin thoroughly with mild soap and water. May dry skin.

**HMIS:**

Health – 1  
Flammability -0  
Physical Hazard-1  
Personal Protection-E

**NFPA:**

Health-1  
Flammability-0  
Reactivity-0  
Serious Hazard=3

**Rating Scale:**

Minimal Hazard=0  
Slight Hazard=1  
Moderate Hazard=2  
Extreme Hazard=4

**Legend:**

ACGIH American Conference of Governmental Industrial Hygienists  
CAA Clean Air Act  
CAS Chemical Abstracts Service (Registry Number)  
CERCLA Comprehensive Environmental Response, Compensation and Liability Act of 1980  
CFR Code of Federal Regulations  
DOT United States Department of Transportation  
DSL Canadian Domestic Substances List  
EPA United States Environmental Protection Agency  
EPCRA Emergency Planning & Community Right –to-know act  
HMIS Hazardous Materials Identification System  
IARC International Agency for Research on Cancer  
MSHA Canadian Non-Domestic Substances List  
NFPA National Fire Protection Association  
NIOSH National Institute for Occupational Safety and Health  
OSHA Permissible Exposure Limit  
RCRA Resource Conservation and Recovery Act  
SARA Superfund Amendments and Reauthorization Act of 1986  
TLV Threshold Limit Value  
UN/NA# United Nations/North America number  
WHMIS Workplace Hazardous Material Information System

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