

# Material Safety Data Sheet

## Verifi™ CO<sub>2</sub> Booster Pack

SDS # : 7225-A  
Revision Date: 2012-04-11  
Version 2



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This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

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<b>Product name</b>	<b>Verifi™ CO<sub>2</sub> Booster Pack</b>
<b>Formula</b>	This product consists of 3 separate components. Below an MSDS is provided for each of the components.
<b><u>Manufacturer</u></b> FMC Corporation Agricultural Products Group 1735 Market Street Philadelphia, PA 19103 General Information: Phone: (215) 299-6000 E-Mail: msdsinfo@fmc.com	<b><u>Emergency telephone number</u></b>  For leak, fire, spill or accident emergencies, call: +1 800.424.9300 (CHEMTREC - U.S.A.) +1 703.527.3887 (CHEMTREC - Collect - All Other Countries), Medical Emergencies: (800) 331-3148 (U.S.A. & Canada) +1 (651) 632-6793 (All Other Countries - Collect)

<b>Revision Date:</b>	2012-04-11
<b>Reason for revision:</b>	New Product

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#### Prepared By

FMC Corporation

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**End of Material Safety Data Sheet**

# Material Safety Data Sheet

## Magnesium Chloride

SDS # : 006930-A  
Revision Date: 2011-09-09  
Version 1



This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** Magnesium Chloride

**Synonyms** Magnesium chloride, hexahydrate; Magnesium chloride, 6-hydrate, crystal

**Supplier** FMC Corporation  
Agricultural Products Group  
1735 Market Street  
Philadelphia, PA 19103  
General Information:  
Phone: (215) 299-6000  
E-Mail: msdsinfo@fmc.com

**Emergency telephone number**  
For leak, fire, spill or accident emergencies, call:  
+1 800.424.9300 (CHEMTREC - U.S.A.)  
+1 703.527.3887 (CHEMTREC - Collect - All Other Countries),  
Medical Emergencies:  
(800) 331-3148 (U.S.A. & Canada)  
+1 (651) 632-6793 (All Other Countries - Collect)

### 2. Hazards identification

**Appearance** colorless flakes, crystals

**Physical State** Solid

**Odor** odorless

**Flammable properties** None known

**Potential health effects**

**Acute effects**

- Eyes** May cause slight irritation.
- Skin** Substance may cause slight skin irritation.
- Inhalation** May cause irritation of respiratory tract.
- Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. However, if elimination is blocked by bowel blockage or other reasons, CNS depression, lack of reflexes, hypocalcemia (deficiency of calcium in the blood) may occur.

**Chronic effects** No information available.

### 3. Composition/information on ingredients

#### Hazardous ingredients

Chemical Name	CAS-No	Weight %
Magnesium Chloride	7791-18-6	100

### 4. First aid measures

Eye contact	Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.
Skin contact	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

## 5. Fire-fighting measures

**Flammable properties** None known

### Special hazards arising from the substance or mixture

**Sensitivity to Mechanical Impact** not applicable  
**Sensitivity to Static Discharge** not applicable

### Extinguishing media

**Suitable extinguishing media** Water spray, Dry chemical, Alcohol-resistant foam, Carbon dioxide (CO<sub>2</sub>).

### Advice for fire-fighters

**Protective equipment and precautions for firefighters** As in any fire, wear self-contained breathing apparatus and full protective gear.

### NFPA

<b>Health Hazard</b>	1
<b>Flammability</b>	0
<b>Stability</b>	0
<b>Special Hazards</b>	-

## 6. Accidental release measures

**Personal precautions** Isolate and post spill area. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.

**Environmental precautions** Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

**Other** For further clean-up instructions call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

## 7. Handling and storage

<b>Handling</b>	Do not contaminate water, food or feed by storage or disposal.
<b>Storage</b>	Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Store in original container only.

## 8. Exposure controls/personal protection

<b>Exposure guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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### Occupational exposure controls

<b>Engineering measures</b>	Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
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### Personal protective equipment

<b>Eye/face protection</b>	When used according to use directions, no special eye protection is required. Handling during manufacture or in the event of an accidental release requires use of safety glasses or a face shield.
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<b>Respiratory protection</b>	Avoid breathing vapor or mist.
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<b>Skin and body protection</b>	Follow use directions. Avoid contact with skin and clothing.
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<b>Hand protection</b>	Protective gloves
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<b>Hygiene measures</b>	Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.
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## 9. Physical and chemical properties

<b>Appearance</b>	colorless flakes, crystals
<b>Color</b>	colorless
<b>Physical State</b>	Solid
<b>Odor</b>	odorless
<b>pH</b>	Neutral (5% in water)
<b>Melting Point/Range</b>	118 °C / 244
<b>Freezing point</b>	No information available
<b>Boiling Point/Range</b>	not applicable
<b>Flash Point</b>	not applicable
<b>Evaporation rate</b>	not applicable
<b>Autoignition Temperature</b>	not applicable
<b>Flammable properties</b>	None known
<b>Vapor pressure</b>	not applicable
<b>Vapor density</b>	No information available
<b>Specific Gravity</b>	1.57
<b>Relative density</b>	No information available
<b>Molecular Weight</b>	203.3

# Magnesium Chloride

SDS # : 006930-A  
Revision Date: 2011-09-09  
Version 1

Water solubility 167g/100mL  
Percent volatile No information available  
Partition coefficient: not applicable  
Viscosity No information available  
Oxidizing properties not applicable

## 10. Stability and reactivity

**Stability** Conversion to oxychloride upon strong ignition. When heated to temperatures above 300°C, it emits toxic fumes of chlorine gas.

**Conditions to avoid** Heat, Moisture

**Materials to avoid** 2-Peroxy-carboxylic acid, Strong oxidizing agents

**Hazardous decomposition products** Thermal decomposition can lead to release of toxic/corrosive gases and vapors: Hydrochloric acid.

**Hazardous polymerization** Hazardous polymerization does not occur

## 11. Toxicological information

**Eye contact** Product dust may cause mechanical eye irritation.  
**Skin contact** Substance may cause slight skin irritation.

**LD50 Oral** 8100 mg/kg (rat)

**Chronic Toxicity - Other Ingredient(s)**

**Chronic Toxicity** No information available

**Carcinogenicity** Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).

## 12. Ecological information

### Ecotoxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Magnesium Chloride	2200 mg/L EC50 72 h (Desmodesmus subspicatus)	LC50 4210 mg/L Gambusia affinis 96 h LC50 1970-3880 mg/L Pimephales promelas 96 h		EC50 1400 mg/L 24 h EC50 140 mg/L 48 h

### Environmental Fate

**Persistence and degradability** No information available.

## 13. Disposal considerations

**Waste disposal methods** If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.

**Contaminated packaging** Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions

**14. Transport information**

DOT not regulated

TDG not regulated

ICAO/IATA not regulated

IMDG/IMO not regulated

**15. Regulatory information**

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	No
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**International Regulations**

**Mexico - Grade** Slight risk, Grade 1

**Canada**

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.**

**WHMIS Hazard Class** Non-controlled

## 16. Other information

Revision Date: 2011-09-09  
Reason for revision: New Product

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# Material Safety Data Sheet

## Sodium Bicarbonate

SDS # : 005574-A  
Revision Date: 2011-09-14  
Version 1



This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** Sodium Bicarbonate

**Synonyms** Sodium hydrogen carbonate; sodium acid carbonate; baking soda; bicarbonate of soda

**Manufacturer**  
FMC Corporation  
Agricultural Products Group  
1735 Market Street  
Philadelphia, PA 19103  
General Information:  
Phone: (215) 299-6000  
E-Mail: msdsinfo@fmc.com

**Emergency telephone number**  
For leak, fire, spill or accident emergencies, call:  
+1 800.424.9300 (CHEMTREC - U.S.A.)  
+1 703.527.3887 (CHEMTREC - Collect - All Other Countries),  
Medical Emergencies:  
(800) 331-3148 (U.S.A. & Canada)  
+1 (651) 632-6793 (All Other Countries - Collect)

### 2. Hazards identification

**Appearance** white crystalline powder

**Physical State** Solid

**Odor** odorless

**Flammable properties** None known

**Potential health effects**

**Acute effects**

- Eyes** May cause irritation.
- Skin** Substance may cause slight skin irritation.
- Inhalation** May cause irritation of respiratory tract.
- Ingestion** Ingestion of large amounts may cause gastrointestinal discomfort including blockage, nausea, vomiting and diarrhea.

**Chronic effects** No information available.

### 3. Composition/information on ingredients

#### Hazardous ingredients

Chemical Name	CAS-No	Weight %
Sodium Bicarbonate	144-55-8	99-100

### 4. First aid measures



Eye contact	Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.
Skin contact	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**5. Fire-fighting measures**

**Flammable properties** None known

**Special hazards arising from the substance or mixture**

**Sensitivity to Mechanical Impact** not applicable  
**Sensitivity to Static Discharge** not applicable

**Extinguishing media**

**Suitable extinguishing media** Water spray, Dry chemical, Alcohol-resistant foam, Carbon dioxide (CO<sub>2</sub>).

**Advice for fire-fighters**

**Protective equipment and precautions for firefighters** As in any fire, wear self-contained breathing apparatus and full protective gear.

**NFPA**

<b>Health Hazard</b>	1
<b>Flammability</b>	0
<b>Stability</b>	0
<b>Special Hazards</b>	-

**6. Accidental release measures**

**Personal precautions** Isolate and post spill area. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.

**Environmental precautions** Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

**Other** For further clean-up instructions call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

## 7. Handling and storage

<b>Handling</b>	Do not contaminate water, food or feed by storage or disposal.
<b>Storage</b>	Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Store in original container only.

## 8. Exposure controls/personal protection

<b>Exposure guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
<b>Occupational exposure controls</b>	
<b>Engineering measures</b>	Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
<b>Personal protective equipment</b>	
<b>Eye/face protection</b>	When used according to use directions, no special eye protection is required. Handling during manufacture or in the event of an accidental release requires use of safety glasses or a face shield.
<b>Respiratory protection</b>	Avoid breathing vapor or mist.
<b>Skin and body protection</b>	Follow use directions. Avoid contact with skin and clothing.
<b>Hand protection</b>	Protective gloves
<b>Hygiene measures</b>	Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

## 9. Physical and chemical properties

<b>Appearance</b>	white crystalline
<b>Color</b>	white
<b>Physical State</b>	Solid
<b>Odor</b>	odorless
<b>pH</b>	8.3
<b>Melting Point/Range</b>	60 °C / 140
<b>Freezing point</b>	No information available
<b>Boiling Point/Range</b>	not applicable
<b>Flash Point</b>	not applicable
<b>Evaporation rate</b>	not applicable
<b>Autoignition Temperature</b>	not applicable
<b>Flammable properties</b>	None known
<b>Vapor pressure</b>	not applicable
<b>Vapor density</b>	No information available
<b>Specific Gravity</b>	2.2
<b>Relative density</b>	No information available
<b>Water solubility</b>	7.8%

# Sodium Bicarbonate

SDS # : 005574-A  
Revision Date: 2011-09-14  
Version 1

Percent volatile No information available  
Partition coefficient: not applicable  
Viscosity No information available  
Oxidizing properties not applicable

## 10. Stability and reactivity

Stability Stable  
Conditions to avoid Heat, Moisture  
Materials to avoid Acids, Monoammonium phosphate or a sodium-potassium alloy  
Hazardous decomposition products Carbon oxides  
Hazardous polymerization Hazardous polymerization does not occur

## 11. Toxicological information

Eye contact May cause irritation.  
Skin contact Substance may cause slight skin irritation.  
LD50 Oral 4220 mg/kg (rat)  
Chronic Toxicity - Other Ingredient(s)  
Chronic Toxicity No information available  
Carcinogenicity Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).

## 12. Ecological information

### Ecotoxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Sodium Bicarbonate	650 mg/L EC50 120 h (Nitzschia linearis)	LC50 8250-9000 mg/L Lepomis macrochirus 96 h		EC50 2350 mg/L 48 h

### Environmental Fate

Persistence and degradability No information available.

## 13. Disposal considerations

Waste disposal methods If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.

**Contaminated packaging** Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions

## 14. Transport information

**DOT** not regulated

**TDG** not regulated

**ICAO/IATA** not regulated

**IMDG/IMO** not regulated

## 15. Regulatory information

### U.S. Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### **SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	No
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### International Regulations

**Mexico - Grade** Slight risk, Grade 1

#### Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class** Non-controlled

## 16. Other information

**Revision Date:** 2011-09-14  
**Reason for revision:** New Product

## Sodium Bicarbonate

SDS # : 005574-A

Revision Date: 2011-09-14

Version 1

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# Material Safety Data Sheet

## Verifi™ CO2 Booster 1

SDS # : 006937-A  
Revision Date: 2012-03-09  
Version 1



This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** Verifi™ CO2 Booster 1

**Manufacturer**  
FMC Corporation  
Agricultural Products Group  
1735 Market Street  
Philadelphia, PA 19103  
General Information:  
Phone: (215) 299-6000  
E-Mail: msdsinfo@fmc.com

**Emergency telephone number**  
For leak, fire, spill or accident emergencies, call:  
+1 800 / 424 9300 (CHEMTREC - U.S.A.)  
+1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries),  
Medical Emergencies:  
(800) 331-3148 (U.S.A. & Canada)  
+1 (651) 632-6793 (All Other Countries - Collect)

### 2. Hazards identification

**Appearance** powder

**Physical state** solid

**Odor** odorless

**Flammable properties** Powdered material may form explosive dust-air mixtures.

**Potential health effects**

**Acute effects**

- Eyes** Severely irritating (eyes).
- Skin** May cause irritation.
- Inhalation** May cause irritation of respiratory tract.
- Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic effects** Repeated ingestion may cause tooth enamel erosion.

### 3. Composition/information on ingredients

#### Hazardous ingredients

Chemical Name	CAS-No	Weight %
Citric Acid	5949-29-1	95-100
Amorphous silica gel	63231-67-4	1-5
Silica gel	112945-52-5	1-5

### 4. First aid measures

Eye contact	Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.
Skin contact	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

## 5. Fire-fighting measures

<b>Flammable properties</b>	Powdered material may form explosive dust-air mixtures.
<b>Sensitivity to Mechanical Impact</b>	not applicable
<b>Sensitivity to Static Discharge</b>	not applicable
<b>Suitable extinguishing media</b>	Water spray, Dry chemical, Alcohol-resistant foam, Carbon dioxide (CO <sub>2</sub> ).
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus and full protective gear.

### NFPA

<b>Health Hazard</b>	2
<b>Flammability</b>	1
<b>Stability</b>	0
<b>Special Hazards</b>	-

## 6. Accidental release measures

<b>Personal precautions</b>	Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.
<b>Environmental precautions</b>	Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.
<b>Methods for containment</b>	Use a wet sweeping compound or water to prevent dust formation.
<b>Methods for cleaning up</b>	Sweep up and shovel into suitable containers for disposal. Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.
<b>Other</b>	For further clean-up instructions call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

## 7. Handling and storage

<b>Handling</b>	Do not contaminate water, food or feed by storage or disposal.
<b>Storage</b>	Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Store in original container only.

## 8. Exposure controls/personal protection

### Exposure guidelines

Chemical Name	British Columbia	Quebec	Ontario TWAEV	Alberta
Amorphous silica gel 63231-67-4		TWA: 6 mg/m <sup>3</sup>		

### Occupational exposure controls

#### Engineering measures

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

### Personal Protective Equipment

#### General Information

If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

#### Respiratory protection

For dust, splash, mist or spray exposures wear a filtering mask.

#### Eye/face protection

For dust, splash, mist or spray exposure, wear chemical protective goggles or a face-shield.

#### Skin and body protection

Wear long-sleeved shirt, long pants, socks, shoes, and gloves.

#### Hand protection

Protective gloves

#### Hygiene measures

Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

## 9. Physical and chemical properties

Appearance	powder
Physical state	solid
Odor	odorless
pH	No information available.
Melting Point/Range	No information available.
Freezing point	No information available
Boiling Point/Range	not applicable
Flash Point	not applicable
Evaporation rate	not applicable
Autoignition Temperature	not applicable
Flammable properties	Powdered material may form explosive dust-air mixtures.
Vapor pressure	No information available
Vapor density	No information available
Water solubility	No information available
Percent volatile	No information available
Partition coefficient:	not applicable
Viscosity	No information available
Oxidizing properties	not applicable



**10. Stability and reactivity**

<b>Stability</b>	Stable
<b>Conditions to avoid</b>	Heat, flames and sparks
<b>Materials to avoid</b>	Metal nitrates, Bases, Potassium tartrate, Copper alloys, copper, Aluminum, Aluminium alloys, Zinc, Zinc alloys
<b>Hazardous decomposition products</b>	Carbon oxides.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur

**11. Toxicological information**

<b>Eye contact</b>	Severely irritating (eyes).
<b>Skin contact</b>	Substance may cause skin irritation.
<b>LD50 Oral</b>	3000 mg/kg (Citric acid)
<b><u>Chronic Toxicity - Other Ingredient(s)</u></b>	
<b>Chronic Toxicity</b>	Repeated ingestion may cause tooth enamel erosion.
<b>Carcinogenicity</b>	Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).
<b>Target Organ Effects</b>	Respiratory system.

**12. Ecological information**

Ecotoxicity

Environmental Fate

Chemical Name	log Pow
Citric Acid	-1.72

**13. Disposal considerations**

<b>Waste disposal methods</b>	If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.
<b>Contaminated packaging</b>	Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions

**14. Transport information**

<b><u>DOT</u></b>	not regulated
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<u>TDG</u>	not regulated
<u>ICAO/IATA</u>	not regulated
<u>IMDG/IMO</u>	not regulated

## 15. Regulatory information

### U.S. Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### SARA 311/312 Hazard Categories

<b>Acute Health Hazard</b>	yes
<b>Chronic Health Hazard</b>	no
<b>Fire Hazard</b>	no
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

#### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### International Regulations

Mexico - Grade Moderate risk, Grade 2

#### Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class D2B Toxic materials



## 16. Other information

**Revision Date:** 2012-03-09  
**Reason for revision:** No information available.

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**End of Material Safety Data Sheet**