MATERIAL SAFETY DATA SHEET

MSDS NO. 000002-A

Ausimin Agricultural Gypsum

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Australia

Product Safety: +612 99805337
Version Date: April 1st, 2010
Version 2

SECTION I
PRODUCT IDENTIFICATION

PRODUCT: **Ausimin Agricultural Gypsum**
CHEMICAL FAMILY: Calcium Sulphate Dihydrate ($CaSO_4.2H_2O$)

SECTION 2
COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	TLV(mg/m3)	PEL(mg/m3)	CAS NUMBER
Gypsum (CaSO4.2H2O)	100	10	15(T)/5(R)	13397-24-5
Crystalline Silica	less than 0.1	0.05 (R)	0.1 (R)	14808-60-7

(T) = Total (R) = Respirable
Respirable Crystalline Silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percentage of silica represents total quartz and not the respirable faction. Testing for dust has not detected respirable crystalline silica.
Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as safe (GRAS).
All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

SECTION 3
HAZARD IDENTIFICATION

NFPA Ratings: Health: 0 Fire: 0 ..... Reactivity: 0 Other: N/A
HMIS Ratings: Health: 0 Fire: 0 ..... Reactivity: 0
Personal Protection: Use eye and skin protection. Use NIOSH/MSHA – approved respiratory protection when necessary.
0 = Minimal Hazard 1 = Slight Hazard 2 = Moderate Hazard 3 = Serious Hazard 4 = Severe Hazard
Protection: Use eye and skin protection. Use NIOSH/MSHA-approved respiratory protection when necessary.
E- Safety glasses, gloves and dust respirator
*Respirable crystalline silica can cause lung disease and/or cancer.

EMERGENCY OVERVIEW: This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or the upper respiratory tract.

SECTION 3 HAZARD IDENTIFICATION (continued)

POTENTIAL HEALTH EFFECTS
ACUTE:
Eyes: Airborne dust or direct contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.
Skin: Direct, prolonged or repeated contact with the skin may cause irritation.
Inhalation: Dust exposures generated during the handling of the product may irritate eyes, skin, nose, throat, and upper respiratory tract. Persons subjected to large amounts of this dust will 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 a physician.
Ingestion: If ingested may cause temporary irritation to the gastrointestinal tract, especially the stomach. No known effects.
CHRONIC:
Eyes: None known.
Skin: None known.
Ingestion: No known effects.
Inhalation: Testing of dust from Ausimin Agricultural Gypsum has not detected respirable crystalline silica. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.
TARGET ORGANS: Eyes, skin and respiratory system.
PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

SECTION 4
FIRST AID MEASURES

FIRST AID PROCEDURES
Eyes: In case of contact, do not rub or scratch your eyes. Flush thoroughly with water for 15 minutes to remove particles. If irritation persists, consult a physician.
Skin: Wash with mild soap and water. A commercially available hand lotion may be used to treat dry skin areas. If skin has cracked, take appropriate action to prevent infection and promote healing. If irritation persists, consult a physician.
Inhalation: Remove to fresh air. Leave the area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact a physician.
Ingestion: This product is not intended to be ingested or eaten. No harmful effects expected. No specific recommendations. If gastric disturbance occur, call a physician.
MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

SECTION 5
FIRE FIGHTING MEASURES

General Fire Hazards:	Not expected to burn.
Extinguishing Media:	Water or use extinguishing media appropriate for surrounding fire.
Special Fire Fighting Procedures:	Wear appropriate personal protective equipment (See section 8).
Unusual Fire & Explosion Hazards:	None
Hazardous Combustion Products:	Above 1450º C - decomposes to calcium oxide (CaO) and sulfur dioxide (SO2)
Flash Point:	None Known
Method Used:	Not Applicable
Upper Flammable Limit (UFL):	Not Applicable
Lower Flammable Limit (LFL):	Not Applicable
Auto Ignition	Not Applicable
Flammability Classification	Not Applicable
Rate of Burning	Not Applicable

SECTION 6
ACCIDENTAL RELEASE MEASURES

CONTAINMENT:
No special precautions. Wear appropriate personal protection. (See Section 8)

CLEAN-UP:
Use normal clean up procedures. Wear appropriate protective equipment. Ventilate area. If dry, shovel or sweep up material from spillage and place collected material into a container for recovery or waste disposal. Avoid dust generation. Avoid inhalation of dust and contact with eyes and skin. Maintain proper ventilation. If a vacuum is used to collect dust, use an industrial vacuum cleaner with a high efficiency air filter. If sweeping is necessary, use a dust suppressant. Do not use compressed air for clean up. These procedures will help minimize potential exposure. If washed down, may clog drains.

DISPOSAL:
Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface water. Trace amounts of residue can be flushed to a drain, using plenty of water.

SECTION 7
HANDLING AND STORAGE

HANDLING:
Minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Avoid dust contact with eyes. Wear the appropriate eye protection against dust (See Section 8).
Use good safety and industrial hygiene practices.

STORAGE:
Store at room temperature in a dry location. Keep containers closed when not in use

SECTION 8
EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:
Provide ventilation sufficient to control airborne dust levels especially respirable crystalline silica.
If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits (See Section 2). Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits (see Section 2). If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

RESPIRATORY PROTECTION:
Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

OTHER PERSONAL PROTECTIVE EQUIPMENT:
Eye/Face: Wear eye protection (safety glasses or goggles) to avoid particulate irritation of the eye.
Skin: Gloves or protective clothing are usually not necessary but may be desirable in specific work situations. For brief contact, no precautions other than clean body-covering clothing should be needed. Wear gloves and protective clothing to prevent repeated or prolonged skin contact. Barrier creams or skin lotion may be applied to face, neck, wrist and hands when skin is exposed to help prevent drying of skin.
General: Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

SECTION 9
PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to off white	**Viscosity**	Not Applicable
Physical State	Solid (powder)	**Solubility (H2O)**	~ 0.21 g/100 g solution
Odor	Low to no odor	**Boiling Point**	Not Applicable
pH @ 25 º C	~7	**Melting Point**	Not Applicable
Particle Size	Varies	**Softening Point**	Not Applicable
Molecular Weight Bulk Density	~172 g/mole ~ 45-150 lb/ft3	**Freezing Point Vapor Density (Air = 1)**	Not Applicable
Specific Gravity (H20 = 1)	2.3-2.5	**Vapor Pressure (mm Hg)**	Not Applicable
Percent Volatile	Zero	**Evaporation Rate (BuAc =1)**	Not Applicable
VOC Content	Zero		Not Applicable

SECTION 10
CHEMICAL STABILITY AND REACTIVITY

STABILITY: Stable. **CONDITIONS TO AVOID:** Contact with incompatibles. **INCOMPATIBILITY:** None known. **HAZARDOUS POLYMERIZATION:** Will not occur. **HAZARDOUS DECOMPOSITION:** Above 1450º C - decomposes to calcium oxide (CaO) and sulfur dioxide (SO2)

SECTION 11
TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:
Direct contact may cause eye, skin and/or respiratory irritation. LD_{50}: Not Available for product. LC_{50}: Not Available for product.
CHRONIC EFFECTS / CARCINOGENICITY:
Crystalline silica: Testing of dust from Ausimin Agricultural Gypsum has not detected respirable crystalline silica. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration. In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.
IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

SECTION 12
ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on the ecology. A large discharge directly into waterways would not be expected to kill aquatic life.
Ecotoxicity value: Not determined.

SECTION 13
DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:
Dispose of material in accordance with Federal, State, Provincial, and Local regulations. Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Never discharge directly into sewers or surface water.

SECTION 14
TRANSPORTATION INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.
Shipping Name: Same as product name.
Hazard Class: Not classified
UN/NA #: None. Not classified.
Packing Group: None.
Label (s) required: Not applicable.
GGVSec/MDG-Code: Not classified.
ICAO/IATA-DGR: Not applicable.
RID/ADR: None
ADNR: None

SECTION 15
REGULATORY INFORMATION

UNITED STATES REGULATIONS
All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	302	304	313	CER CLA	CAA Sec.112	RCRA Code
Gypsum ($CaSO_4 \cdot 2H_2O$)	100	NL	NL	NL	NL	NL	NL
Crystalline Silica	<0.1	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed
SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)
SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)
SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313
CERCLA Hazardous Substances: Reportable Quantity (RQ)
CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)
RCRA Hazardous Waste: RCRA hazardous waste code

FDA Food and Drug Administration [CFR Title 21, v.3, sec 184.1230] – Calcium Sulfate is Generally Recognized as Safe (GRAS).

Label Information
∆WARNING!
Dust created from product may cause eye, skin, nose, throat or upper respiratory irritation. Avoid inhalation of dust and eye contact. Use in a well-ventilated area. Wear a NIOSH/MSHA-approved respirator when dusty. Use proper ventilation to reduce dust exposure. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call physician. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call a physician.

KEEP OUT OF REACH OF CHILDREN.

Key/Legend

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

END