MATERIAL SAFTY DATA SHEET

CALCIUM CHLORIDE

PRODUCT: CALCIUM CHLORIDE

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

WATER SPECIALIST SUPPLY CO.,LTD.

78/7 Moo4 Khae Rai, Krathum Baen, Samut Sakhon 74110 Call (+66) 34-440-851 to 3, (+66) 95-367-5790 Fax (+66) 34-440-851 to 3 ext.105 Email: Water_wss@hotmail.com

PREPARED BY...... Water Specialist Supply CO.,LTD

PRODUCT NAME......Calcium Chloride.

CHEMICAL FORMULA......CaCl2.

MOLECULAR WEIGHT......110.98.

CHEMICAL FAMILY...... INORGANIC SALT .

EMERGENCY PHONE NO...... (+66)34-440-851 to 3 or (+66)95-367-5790

SECTION 02: COMPOSITION/INFORMATION ON INGREDIENT

Ingredients	Content	C.A.S.#
Calcium chloride	60-100%	10043-52-4

SECTION 03: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

CAUTION! MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Avoid contact with eyes, skin and clothing. Avoid breathing airborne product. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

This product is a/an white powder. A nuisance dust. Dike and contain spills. Keep out of sewers and waterways. No significant immediate hazards for emergency response personnel are known.

ACUTE EFFECTS:

HEALTH HAZARDS, GENERAL:

Particulates may cause mechanical irritation to the eyes, nose, throat and lungs. Particulate inhalation may lead to pulmonary fibrosis, chronic bronchitis, emphysema and bronchial asthma. Dermatitis and asthma may result from short contact periods.

INHALATION: Irritating to the respiratory tract if inhaled.

INGESTION: Harmful if swallowed. May cause gastric distress, nausea and vomiting if

ingested.

SKIN: Irritating to the skin. EYES: Irritating to the eyes.

CHRONIC EFFECTS:

CARCINOGENICITY: IARC: Not listed. OSHA: Not regulated. NTP: Not listed.

ROUTE OF ENTRY: Inhalation. Skin and/or eye contact. **TARGET ORGANS**: Respiratory system, lungs. Skin. Eyes.

SECTION 04: FIRST AID MEASURES

INSTRUCTIONS:

GENERAL: Persons seeking medical attention should carry a copy of this MSDS with them.

INHALATION: Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Get medical attention.

INGESTION: Drink a couple of glasses water or milk. Do not give victim anything to drink of he is unconscious. Get medical attention.

SKIN: Wash skin thoroughly with soap and water. Remove contaminated clothing. Get medical attention if any discomfort continues.

EYES: Promptly wash eyes with lots of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

SECTION 05 :FIRE FIGHTING MEASURES

FLAMMABILITY LIMIT - LOWER(%): N/D

FLAMMABILITY LIMIT - UPPER(%): N/D

EXTINGUISHING MEDIA:

Use extinguishing media appropriate for surrounding fire. Carbon dioxide (CO2). Dry chemicals. Foam. Water spray, fog or mist.

SPECIAL FIRE FIGHTING PROCEDURES:

No specific fire fighting procedure given.

UNUSUAL FIRE & EXPLOSION HAZARDS:

No unusual fire or explosion hazards noted.

HAZARDOUS COMBUSTION PRODUCTS:

This material is not combustible. No specific hazardous combustion products noted.

SECTION 06: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Wear proper personal protective equipment (see MSDS Section 8).

SPILL CLEAN-UP PROCEDURES:

Avoid generating and spreading of dust. Shovel into dry containers. Cover and move the containers. Flush the area with water. Do not contaminate drainage or waterways. Repackage or recycle if possible.

SECTION 07: HANDLING AND STORAGE

HANDLING PRECAUTIONS:

Avoid handling causing generation of dust. Wear full protective clothing for prolonged exposure and/or high concentrations. Eye wash and emergency shower must be available at the work place. Wash hands often and change clothing when needed. Provide good ventilation. Mechanical ventilation or local exhaust ventilation is required.

STORAGE PRECAUTIONS.

Store at moderate temperatures in dry, well ventilated area. Keep in original container.

SECTION 08: EXPOSE CONTROL/PERSONAL PROTECTION

Airborne Exposure Limits:

- -OSHA permissible Exposure Limit(PEL): 5mg/m3(TWA)for Calcium Chloride.
- -ACGIH Threshold Limit Value(TLV): 3mg/m3(TWA) for Calcium Chloride.

Ingredient Comment:

No exposure limits noted for ingredient(s). Exposure limits are for Particulates Not Otherwise Classified (PNOC).

Protective Equipment:







Engineering Control:

Use appropriate engineering controls such as, exhaust ventilation and process enclosure, to reduce air contamination and keep worker exposure below the applicable limits.

Ventilation System:

Supply natural or mechanical ventilation adequate to exhaust airborne product and keep exposures below the applicable limits.

Personal Respirators:

Use at least a NIOSH-approved N95 half-mask disposable or reuseable particulate respirator. In work environments containing oil mist/aerosol use at least a NIOSH-approved P95 half-mask disposable or reuseable particulate respirator.

Eye Protection:

Wear dust resistant safety goggles where there is danger of eye contact.

Protective Clothing:

Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygienic Work Practices:

Wash promptly with soap and water if skin becomes contaminated. Change work clothing daily if there is any possibility of contamination.

SECTION 09 : PHYSICAL AND CHEMICAL PROPERTIES

Physical state: White Powder, dust.

Odorless or no characteristic odor.

Vapor Pressure (mm Hg): N.AV.

Vapor density (AIR=1): N.AV.

Evaporation Rate: N.AV.

PH: N.AV

Density/Specific Gravity: 2.2 @68 F.

Solubility: Very soluble in water.

SOLUBILITY VALUE (g/100g H2O 68°F): 75.

SECTION 10:STABILITY AND REACTIVITY

Stability:

Normally stable.

Condition To Avoid:

Avoid contact with water.

Hazardous Polymerization:

Will not polymerize.

Polymerization Description:

Not relevant.

Material To Avoid:

Sulfuric acid

Hazardous Decomposition Products:

No specific hazardous decomposition products noted.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological Data:

TOXIC DOSE - LD 50: 1000 mg/kg (oral rat)

SECTION 12: ECOLOGICAL CONSIDERATION

ECOLOGICAL INFORMATION:

Contact M-I Environmental Affairs for ecological information.

SECTION 13: DISPOSAL CONSIDERATION

Waste Management:

This product, should it become a waste, is not hazardous by U.S. RCRA criteria.

Disposal Methods:

Recover and reclaim or recycle, if practical. Should this product become a waste, dispose of in a permitted industrial landfill. Ensure that containers are empty by RCRA criteria prior to disposal in a permitte

SECTION 14: TRANSPORT INFORMATION

Product RQ: N.AV.

U.S. DOT: Not regulated.

U.S. DOT Class: Not regulated.

CANADIAN Transport: Not regulated.

TDGR Class: Not regulated.

Sea Transport: Not regulated.

IMDG Class: Not regulated.

Air Transport: Not regulated.

ICAO Class: Not regulated.

SECTION 15: REGULATORY INFORMATION

CAS No.: 10043-52-4 **TSCA**: Yes **CERCLA**: No.

SARA 302/313: No DSL(CAN):Yes

US FEDERAL REGULATIONS : Not a hazardous waste by U.S. RCRA criteria. See

Section 13.

WASTE CLASSIFICATION: Not a hazardous waste by U.S. RCRA criteria. See

Section 13.

REGULATORY STATUS: This Product or its components, if a mixture, is subject to following regulations (Not meant to be all inclusive - selected regulations represented):

SECTION 313: This product does not contain toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.

SARA 311 Categories: 1: Immediate (Acute) Health Effects.

The components of this product are listed on or are exempt from the following international chemical registries:

TSCA (U.S.)

DSL (Canada)

EINECS (Europe)

STATE REGULATIONS:

STATE REGULATORY STATUS:

This product or its components, if a mixture, is subject to following regulations (Not meant to be all inclusive - selected regulations represented):.

None.

PROPOSITION 65: This product does not contain chemicals considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer or reproductive toxicity, and for which warnings are now required.

REGULATORY STATUS: This Material Safety Data Sheet has been prepared in compilance with the Controled Product Regulations.

Canadian WHMIS Classification: D2B - Other Toxic Effects: Toxic Material.

NPCA HMIS HAZARD INDEX: 1 Slight Hazard.

FLAMMABILITY: 0 Minimal Hazard.

REACTIVITY: 1 Slight Hazard.

NPCA HMIS PERS. PROTECT. INDEX: E - Safety Glasses, Gloves, Dust Respirator

USER NOTES: N.AV. = Not applicable N/D = Not determined

INFORMATION SOURCES:

OSHA Permissible Exposure Limits, 29 CFR 1910, Subpart Z, Section 1910.1000, Air Contaminants.

ACGIH Threshold Limit Values and Biological Exposure Indices for Chemical Substances and Physical Agents (latest edition).

Sax's Dangerous Properties of Industrial Materials, 9th ed., Lewis, R.J. Sr., (ed.), VNR, New York, New York, (1997).

Product information provided by the commercial vendor(s).

Label Precautions:

Avoid contact with eyes ,Skin and clothing.

Wash throughly after handling.

Keep container closed.

Avoid breathing dust.

Use only with adequate ventilation.

Label First Aid:

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician immediately. In case of contact, wipe off excess material from skin then immediately flush eyes or skin with plenty of water at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician. If inhale, remove format fresh air. If not breathing, give artificial respiration. If not breathing is difficult, give oxygen. Call a physician.

Disclaimer:

Water Specialist Supply(WSS THAILAND) CO.,Ltd provide information contained here in good faith but make no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handing of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.