MATERIAL SAFETY DATA SHEET (MSDS)
WOLLASTONITE

Date of Compilation: 15/01/2021 **MSDS No: WOL01** **Version: 1.11**

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Wollastonite: Hidrox Wollastonite 10-60, Hidrox Wollastonite 200

Chemical Component: Calcium silicate mineral (calcium metasilicate)

Chemical Formula: $CaSiO_3$

Material Uses: Primary uses: glazes; ceramic frames; fillers for paints and plastics; welding rods, metallurgical powders; cement fiber boards; low temperature refractories; reinforcing filler for plastics, sealants and road marking paints; brake linings; gaskets; Mineral source of Ca, Mg, Si, used in agriculture, horticulture and steel manufacture.

Synonyms: Wollastonite, calcium silicate; calcium metasilicate

Company Information: Hidrox Mineral Processors, 4542 Dr Eugene Muller Street, Swakopmund, Namibia, matthew@hidroxmp.com/christian@hidroxmp.com, +264818200122/+264811249313

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Main Constituent: Natural Wollastonite

Substance/mixture: Substance

Chemical name: Calcium silicate mineral (calcium metasilicate)

NAME	PRODUCT IDENTIFIER	%	CLASSIFICATION (GHS-US)
Wollastonite ($Ca(SiO3)$)	(CAS No) 13983-17-0	90-100	Not classified

SECTION 3: HAZARD(S) IDENTIFICATION

Specific Risks: Airborne particulate created during handling is considered nuisance dust and should be minimized through the use of good work practices and adequate ventilation.

Primary Routes of Entry: Via respirable dust to the lungs and respiratory system and via coarse dust and particulate to the eyes.

Primary Target Organs: Lungs, respiratory system and eyes.

Potential Health Effects

Eye: A mechanical irritant which can cause moderate to severe eye irritation.

Skin: Possible dryness or irritation resulting from long term exposures to product dust.

Ingestion: Non-hazardous when ingested. Potentially a mild irritant to the GI tract if excessive quantity is ingested.

Inhalation: Irritating to the mucous membranes and respiratory tract. Excessive exposures to dust may cause sore throat, coughing or upper respiratory irritation.

Medical Conditions Aggravated by Exposure: Pre-existing chronic upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma.

Carcinogenicity: This product is not classified by NTP or OSHA. IARC classifies wollastonite as Group 3: Unclassifiable as to carcinogenicity to humans.

SECTION 4: FIRST AID MEASURES

General: Take off contaminated clothing and shoes. Never give anything by mouth to an unconscious person. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label. If exposed or concerned: Get medical advice/attention.

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical assistance if irritation occurs.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if necessary. Keep victim warm and at rest. Get medical assistance at once.

Skin: Wash with plenty of soap and water. Wash contaminated clothing before reuse. Get medical assistance if irritation develops.

Ingestion: Do NOT induce vomiting. Unlikely to be toxic by ingestion. If victim is conscious, give 2-4 glasses of water or milk. Never give anything by mouth to an unconscious person. Get medical assistance.

Most important symptoms and effects both acute and delayed: No acute and delayed symptoms are observed.

Indication of any immediate medical attention and special treatment needed: No specific actions are required.

Notes to Physician: Treat symptomatically and supportively.

SECTION 5: FIRE FIGHTING MEASURES

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand and full protective gear.

Suitable extinguishing media: Not combustible. Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

Specific Hazards Arising from the Chemical: No specific fire or explosion hazard. This product is not flammable and does not support fire.

Hazardous Thermal Decomposition Products: There are no hazardous decomposition products.

Advice for firefighters:

Special Protective Actions for Firefighters: Product may become slippery when wet.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation and spreading.

Environmental precautions: Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

Methods and material for containment and cleaning up: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with skin and eyes. Use only in well ventilated areas. Avoid dust formation. Do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust.

Hygiene Measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Protect from heat and incompatibles.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Appropriate engineering controls: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.

Personal protective equipment: Safety glasses. Gloves. Dust formation: dust mask.

Hand and skin protection: Wear protective gloves, including but not limited to neoprene or nitrile rubber gloves. Wear appropriate protective clothing to prevent skin exposure.

Eye protection: Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear appropriate protective eyeglasses or chemical safety goggles.

Respiratory protection: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: disposable particulate mask

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid. Powder. Grain shape: acicular

Appearance: White acicular, free flowing non-metallic mineral powder

Colour: White

Odour: None

Refractive index: 1.62 – 1.64

pH: 9.9 in a 10% Aqueous Solution

Melting point: 1540 °C

Freezing point: No data available

Boiling point: No data available

Relative evaporation rate (butyl acetate=1): No data available

Flammability (solid, gas): No data available

Vapor pressure: < 0.01 mm Hg @ 20°C

Relative density: 2.86 - 3.09

Molecular mass: 116.16 g/mol

Solubility: Water: 0.095 g/l

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity, kinematic: No data available

Viscosity, dynamic: No data available

Explosion limits: No data available

Explosive properties: No data available

Oxidizing properties: No data available

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Reactivity: No additional information available.

Conditions to Avoid: No specific data.

Incompatibilities with Other Materials: No particular incompatibility.

Hazardous Decomposition Products: Not relevant.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation. Ingestion.

Effects of Acute Exposure to Material: Inhalation of dust may irritate the respiratory tract. No reports of acute toxicity have been reported for this material.

Effects of Chronic Exposure to Material: Silica: Long term exposure to dust particles in the respirable size range has caused obstructive lung disease (pneumoconiosis). Long term exposure to mineral dusts containing silica at levels exceeding legislated exposure limits has caused silicosis, a serious and progressive disease of the lung. Symptoms may occur many years after the initial exposure to silica and may include shortness of breath, difficulty in breathing, coughing, diminished work capacity, diminished chest expansion, reduction of lung volume and right heart enlargement and/or failure. The only reliable method of detecting silicosis is by chest X-ray. Silicosis may aggravate other chronic pulmonary conditions and may increase the risk of pulmonary tuberculosis. Smoking aggravates the effects of silica exposure.

Carcinogenicity: Wollastonite: Based upon the available data, the classification is not met. Wollastonite was evaluated and classified by IARC as Class 3 ("Cannot be classified as a carcinogenic to humans").

Carcinogenicity: Silica: In the form of crystalline Quartz is listed as a potential carcinogen by the International Agency for Research on Cancer (IARC). IARC has determined that there is limited evidence of carcinogenicity to humans. Silica is present in this material at greater than 0.1% resulting in this product being classified as a Controlled Product.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: There is no ecotoxicological data available about the product as such.

Ecological Hazards: Wollastonite is a naturally occurring mineral. Unless contaminated in service, this product is neutral to the environment.

Physical: No information available.

Other: The product is not classified as hazardous to the environment. Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: This product is a naturally occurring mineral. Unless contaminated in service, this product is neutral to the environment. Landfill. Dispose in a safe manner in accordance with local/national regulations.

Sewage Disposal-relevant Information: Do not empty into drains or sewers.

Specify the Appropriate Methods of Disposal: Avoid dust formation from residues in packaging. Store used packaging in enclosed receptacles. Do not reuse container. Dispose of empty containers to an approved waste disposal facility for recycling or disposal.

Other Information: Avoid release to the environment. Dispose of in compliance with local and national regulations.

SECTION 14: TRANSPORT INFORMATION

US DOT Shipping Name: Not regulated

DOT Label: None

UN/NA Number: None

International Dangerous Goods Information:

IMO: Not regulated as dangerous goods according to the IMDG Code.

ICAO: Not regulated as dangerous goods according to the IACO Technical Instructions.

SECTION 15: REGULATORY INFORMATION

National Legislation / Requirements:

National Environmental Management: Air Quality Act, 39 of 2004: Maximum allowable dust emissions.

Mine Health and Safety Act, 29 of 1996: The personal protective equipment to be worn.

Fertilisers, Farm Feeds, Agricultural Remedies and stock remedies Act, 36 of 1947

SANS 9001:2015 (ISO 9001:2015) – Quality Management Systems.

International Legislation / Requirements:

WOLLASTONITE ($Ca(SiO_3)$) (13983-17-0)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

SECTION 16: OTHER INFORMATION

Training Advice: Read safety data sheet. Workers must be informed of the presence of crystalline silica. Training in the proper use and handling of this product must be provided to workers.

Indication of changes relative to MSDS:

SECTION	PREVIOUS ENTRY	REVISED ENTRY	VERSION	SAFETY RELEVANT

SECTION 17: DISCLAIMER

The information provided in this MSDS is correct to the best of our knowledge, information and belief at the date of its publication and represents the best information currently available to us. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and no warranty, express or implied, or quality specification is made and **Hidrox Mineral Processors** assumes no liability resulting from the use of this MSDS. The user must determine suitability of this information for his application. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.