Material Safety Data Sheet

According to Regulation (EC) No 1907/2006

Acrylic Paint

Version 1.0

Issue date: 30/03/2017

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name:	Acrylic Paint
Additional identification:	Not available
Identification of the product:	See section 3
Index Number:	Not available
REACH registration No.:	Not available

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 Identified uses:

Painting

1.2.2 Uses advised against:

Not available.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative):	—
Supplier(Manufacturer):	LANXI PAINTSLAND STATIONERY CO.,LTD.
Address:	NO239 FANKOU ROAD LIGHT INDUSTRIAL PARK LANXI CITY ZHEJIANG PROVINCE CHINA
Contact person(E-mail):	linda@paintsland.com
Telephone:	+86-574-88890159
Fax:	

1.4 Emergency telephone Number:

+86-579-88890159 Only available during office hours (8:30a.m.-17:30p.m. Beijing Time Zone)

Available outside office hours?	YES		NO	X

Section 2 Hazards Identification

2.1 Classification of the substance/mixture:

2.1.1 Classification:

The mixture is classified as following according to 1999/45/EC and REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard codes
N/A	N/A

For full text of H- phrases: see section 2.2.

1999/45/EC	
Hazards characteristics	R-Phrases
N/A	N/A

For full text of R- phrases: see section 16.

2.2 label elements:

Hazard Pictograms: No hazard pictogram is used.

Signal Word(S): No signal word is used.

Hazard Statement: Not applicable.

Precautionary statement: Not applicable.

2.3 Other hazards :

Not available.

Section 3 Composition/information on ingredients

Substance/Mixture: Mixture

Ingredient(s):

Chemical Name	CAS No.	EC No.	Concentration
water	7732-18-5	231-791-2	4.2%
Calcium carbonate	471-34-1	207-439-9	15%
Phenoxyethanol	122-99-6	204-589-7	0.5%
Acrylic resin emulsion	9003-1-4	202-415-4	70.3%
Pigment White	1345-05-7	215-715-5	10%
1538 brown	4553-89-3	224-924-0	10%
Pigment Red 181	2379-74-0	219-163-6	10%
Pigment Red 81	1224-98-5	235-424-7	`10%
Hansa Yellow G	2512-29-0	219-730-8	10%
Hansa Yellow 10 G	6486-23-3	229-355-1	10%
Pigment Phthalocyanine Green G	328-53-6	215-524-7	10%
Carbon Black	333-86-4	215-609-9	10%
Cyanine blue	147-14-8	205-685-1	10%
Hansa Yellow G	*2512-29-0*	*219-730-8*	*8.4%*
Pigment Red 81	*1224-98-5*	*235-42-7=7*	*1.2%*
Carbon Black	*333-86-4*	*215-609-9*	*0.6%*

Section 4 First aid measures

4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. Seek medical attention. if irritation develops or persists.

4.1.2 In case of skin contact:

Wash skin with soap and copious amounts of water. While removing contaminated clothing and shoes. Be particularly careful to clean folds, crevices, creases and groin.

4.1.3 In case of eyes contact:

Immediately flush eyes with plenty of water. Occasionally lifting the upper and lower eyelids. Get medical attention if irritation occurs.

4.1.4 In case of ingestion:

Never give anything by mouth to an unconscious person. Wash out mouth with water. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical aid.

4.2 Most important symptoms and effects, both acute and delayed:

The product is not classified as harmful to human health effect.

4.3 Indication of any immediate medical attention and special treatment needed:

If skin irritation or rash occurs, get medical advice/attention.

Section 5 Fire-Fighting measures

5.1 Extinguishing media:

Suitable extinguishing media:	Water spray, carbon dioxide, or appropriate foam.
Unsuitable extinguishing media:	Not available.
5.2 Special hazards arising from the substance or mixture	Not available.
5.3 Special fire fighting methods and special protective actions for fire-fighters:	Material should be kept out of eyes and of skin. As in any fire, wear self-contained breathing apparatus pressure-demand. MSHA/NIOSH (approved or equivalent) and full protective gear. Do not release runoff from fire control methods to sewers or waterways.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:	Avoid dust formation. Evacuate area of all unnecessary personnel. Use personal protective equipment. Fine dust dispersed in air may ignite.
6.1.2 For emergency responders:	Wear an appropriate NIOSH/MSHA approved respirator if dust is generated.
6.2 Environmental Precautions:	Avoid disposing into drainage/sewer system or directly into the aquatic environment.
6.3 Methods for Containment and Cleaning up:	Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal. Clean up affected area.
6.4 Reference to other sections:	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for information on disposal.
6.5 Additional information:	Don't use a brush or compressed air for cleaning surfaces or clothing. Clear spills immediately.

Section 7 Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures:	Avoid breathing dusts or fumes. Ensure good ventilation/exhaustion at the

workplace. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

7.1.2 Advice on general occupational hygiene: Do not eat, drink an d smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities: Products stored in a cool, dry area in a closed container.

7.3 Specific end use(s): Not applicable.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits:

Substance			Occupational Exposure Limit Value (8-hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		
	EINECS No.	CAS No.	ppm	mg/ m3	ppm	mg/ m3	Notes
Carbon black	215-609-9	1333-86-4	-	3.5	-	7	-
Titanium dioxide	257-372-4	317-80-2					
total inhalable dust			-	10	-	-	-
respirable dust			-	4	-	-	-

8.1.2 Additional exposure limits under the conditions of use: Not available.

8.1.3 DNEL/DMEL and PNEC-Values: Not available.

8.2 Exposure controls:

8.2.1Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Handle in accordance with good industrial hygiene and safety practice. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear chemical splash goggles.

Hand protection: Wear appreciate gloves to prevent skin exposure.

Body protection: Wear suitable protect ive clothing to prevent skin exposure.

Respiratory protection: Selection of respiratory protection depends on the contaminant type, form and concentration. Select and use respirators in accordance with OSHA 1910.134 and good industrial hygiene practice.

Thermal hazards: Wear suitable protective clothing to prevent heat.

8.2.3 Environmental exposure controls: Avoid discharge into the environment.
According to local regulations, Federal and official regulations.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance: Liquid

Colour: multicolor

Odour: none

Odour threshold: Not available

pH: Not available

Melting point/range (°C): Not available

Boiling point/range (°C):	Not available
Flash point (°C):	Not available
Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Non-flammable
Ignition temperature (°C):	Not available
Upper/lower flammability/explosive limits:	Not available
Vapour pressure (20°C):	Not available
Vapour density:	Not available
Relative Density:	Not available
Bulk density:	Not available
Water solubility (g/l):	Not available
n-Octanol/Water (log Po/w):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity, dynamic (mPa.s):	Not relevant, substance is liquid
Explosive properties:	Not available
Oxidising properties:	Not available
Molecular Formula:	Not available
Molecular Weight:	Not available

9.2. Other information:

Fat solubility(solvent- oil to be specified) etc:	Not available
Surface tension:	Not available
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Po tential:	Not available
Specific gravity :	Not available

Section 10 Stability and reactivity

10.1 Reactivity:	The substance is stable under normal storage and handling conditions.
10.2 Chemical stability:	Stable at room temperature in closed containers under normal storage and handling conditions.
10.3 Possibility of hazardous reactions:	No dangerous reactions known.
10.4 Conditions to avoid:	Incompatible materials.
10.5 Incompatible materials:	Not available.
10.6 Hazardous decomposition products:	Not available.

Section 11 Toxicological information

11.1 Toxicokinetics, metabolism and distribution :

Non-human toxikological data: Not available

11.2 Information on toxicological effects :

Acute toxicity:

titanium dioxide (CAS#1317-80-2)

LD50(Oral, Rat):	> 5000 mg/kg bw
LD50(Dermal, Rabbit):	Not available
LC50(Inhalation, Rat):	> 6.82 mg/L air 4h (male)
Carbon black(CAS#1333-86-4)	
LD50(Oral, Rat):	> 8000 mg/kg bw
LD50(Dermal, Rabbit):	Not available
LC50(Inhalation, Rat):	Not available
Skin corrosion/Irritation:	Not classified
Serious eye damage/irritation:	Not classified
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
STOT- single exposure:	Not classified
STOT-repeated exposure:	Not classified

Section 12 Ecological information

Toxicity:

Titanium dioxide (CAS# 317-80-2)

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	N/A	96h	Fish	OECD 203	N/A	N/A
EC50	N/A	48h	Daphnia	OECD 202	N/A	N/A
EC50	61 mg/L	72h	Algae	OECD 201	N/A	N/A

Carbon black(CAS#1333-86-4)

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	N/A	96h	Fish	OECD 203	N/A	N/A
EC50	> 5600 mg/L	24h	Daphnia	OECD 202	N/A	N/A
EC50	> 10000 mg/L	72h	Algae	OECD 201	N/A	N/A

Persistence and degradability:	Not available.
Bioaccumulative potential:	Not available.
Mobility in soil:	Not available.
Results of PBT&vPvB assessment:	Not available.
Other adverse effects:	Not available.

Section 13 Disposal considerations

13.1 Waste treatment methods: The material should be disposed of by incineration in a chemical incinerator in compliance with national and regional requirements.

13.2 Product / Packaging disposal: If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations.

Section 14 Transport information

	Land transport(ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	Not regulated	Not regulated	Not regulated
UN Proper shipping name	Not regulated	Not regulated	Not regulated
Transport hazard Class	Not regulated	Not regulated	Not regulated
Packaging group	Not regulated	Not regulated	Not regulated
Environmental hazards	No	No	No
Special precautions for user	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not regulated	Not regulated	Not regulated

Section 15 Regulation information

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture:

Relevant information regarding authorization: Not applicable.

Relevant information regarding restriction: Not applicable.

Other EU regulations: Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Other National regulations: Not applicable

Chemical Safety Assessment has been carried out? YES [ ] NO [X]

Section 16 Other information

16.1 Indication of changes :

Version 1.0 Amended by EU No 453/2010

16.2 Relevant R - phrases (number and full text):

Not applicable.

16.3 Training instructions:

Not applicable.

16.4 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.5 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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SAFETY DATA SHEET

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1 IDENTIFICATION

GHS product identifier: White Portland Cement

Chemical name: Calcium compounds, calcium silicate compounds, and other calcium compounds containing iron and aluminum make up the majority of this product.

Other means of identification: Cement, hydraulic cement, masonry cement, silicate.

Relevant identified uses of the substance or mixture and uses advised against: Building materials, construction, a basic ingredient in concrete.

Supplier/Manufacturer: Çimsa Çimento San.Tic. A.Ş Yenitaşkent/MERSIN

Emergency telephone number: Main Offices: (+90) 324-4540060 - 24 Hours

Website: www.cimsa.com.tr

2 HAZARDS IDENTIFICATION

DANGER! Overexposure to portland cement can cause serious, potentially irreversible skin or eye damage in the form of chemical (caustic) burns, including third degree burns. The same serious injury can occur if wet or moist skin has prolonged contact exposure to dry portland cement.

Portland cement is not classifiable as a human carcinogen.

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Physical Hazards: Not classified

Health Hazards:
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

GHS label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause respiratory irritation.
May cause cancer

Precautionary statements

Prevention: Wear protective gloves. Wear eye or face protection. Use only outdoors or in a well-ventilated area. Avoid breathing dust. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed

out of the workplace. Causes eye and skin burns. See Section 4 for additional details. May present risk of engulfment. See Section 7 for additional details. Overexposure to wet cement can cause severe skin damage in the form of chemical burns, including third degree burns. The same severe injury can occur if wet or moist skin is exposed to dry portland cement. Clothing wet with moisture from cement can transmit the caustic effects to the skin, causing chemical burns. Portland cement causes skin burns with little warning; discomfort or pain cannot be relied upon to alert a person to a serious injury. You may not feel pain or the severity of the burn until hours after the exposure.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE: Contact with wet cement may aggravate existing skin conditions. Sensitivity to hexavalent chromium can be aggravated by exposure.

Response: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Prolonged and repeated inhalation of respirable crystalline silica-containing dust in excess of appropriate exposure limits has caused silicosis, fibrosis or scar tissue formations in the lungs. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash with plenty of pH neutral soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: get medical attention. Portland cement may contain trace amounts of hexavalent chromium. Hexavalent chromium is associated with allergic skin reactions which may appear as contact dermatitis and skin ulcerations. Persons already sensitized may react to their first exposure to cement. Other individuals may develop allergic dermatitis after repeated exposure to cement. The symptoms of allergic reactions may include reddening of the skin, rash, and irritation. Symptoms of chronic exposure to wet cement may include reddening, irritation, and eczematous rashes. Drying, thickening, and cracking of the skin and nails may also occur. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Exposure to dust may cause immediate or delayed irritation or inflammation. Eye contact by larger amount of dry power or splashes of wet portland cement may cause effects ranging from moderate eye irritation to chemical burns or blindness. Immediately call a POISON CENTER or physician. IF INGESTED: Irritating to mouth, throat and stomach. Ingestion of large quantities may cause severe irritation and chemical burns of the mouth, throat, stomach and digestive tract. Do not ingest portland cement. Get immediate medical attention.

Storage: Keep container tightly closed in a dry and well-ventilated area.

Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified: Not applicable.

3 COMPOSITION/INFORMATION

Substance/mixture: Mixture

Chemical name: Calcium compounds, calcium silicate compounds, and other calcium compounds containing iron and aluminum make up the majority of this product.

Other means of identification: Cement, hydraulic cement, portland cement, silicate

CAS number/other identifiers
CAS number: 65997-15-1
Product code: Not available.

Ingredient name	%	CAS number
Cement, porland, chemicals	100%	65997-15-1
The structure of Porland cement may contain the following in some concentration ranges:		
Calcium oxide	0-4%	1305-78-8
Quartz	0-.5%	14808-60-7
Hexavalent chromium*	0-26 PPM	18450-29-9
Porland cement also contains gypsum, limestone and magnesium oxside in various concentrations. However, because these components are not classifiable as a hazard under Title 29 Code of Federal Regulations 1910. 1200, they are not required to be listed in this section.		
Gypsum	2-6%	13397-24-5
Limestone	0-5%	1317-65-3
Magnesium oxide	.5-2%	1309-48-4

Any concentration shown as a range is to protect confidentiality or is due to process variation.

*Hexavalent chromium is included due to dermal sensitivity associated with the component.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

4 FIRST AID MEASURES

Description of necessary first aid measures

Eye contact: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.

Inhalation: Seek medical help if coughing or other symptoms persist. Inhalation of large amounts of portland cement requires immediate medical attention. Call a poison center or physician. Remove victim to fresh air and

keep at rest in a position comfortable for breathing. If the individual is not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Skin contact: Get medical attention immediately. Heavy exposure to portland cement dust, wet concrete or associated water requires prompt attention. Quickly remove contaminated clothing, shoes, and leather goods such as watchbands and belts. Quickly and gently blot or brush away excess portland cement. Immediately wash

thoroughly with lukewarm, gently flowing water and non-abrasive pH neutral soap. Seek medical attention for rashes, burns, irritation, dermatitis and prolonged unprotected exposures to wet cement, cement mixtures or liquids from wet cement. Burns should be treated as caustic burns. Portland cement causes skin burns with little warning. Discomfort or pain cannot be relied upon to alert a person to a serious injury. You may not feel pain or the severity of the burn until hours after the exposure. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure.

Ingestion: Get medical attention immediately. Call a poison center or physician. Have

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victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING unless directed to do so by medical personnel. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the

exposed person is conscious, give small quantities of water to drink. Have victim drink 60 to 240 mL (2 to 8 oz.) of water. Stop giving water if the exposed person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Most important symptoms/effects, acute and delayed potential acute health effects

Eye contact: Causes serious eye damage.

Inhalation: May cause respiratory irritation.

Skin contact: Causes severe burns. May cause an allergic skin reaction.

Ingestion: May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following: pain, watering and redness

Inhalation: Adverse symptoms may include the following: respiratory tract irritation and coughing

Skin contact: Adverse symptoms may include the following: pain or irritation, redness and blistering may occur, skin burns, ulceration and necrosis may occur

Ingestion: Adverse symptoms may include the following: stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: Not applicable.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

5 FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: Do not use water jet or water-based fire extinguishers.

Specific hazards arising from the chemical: No specific fire or explosion hazard.

Hazardous thermal decomposition products: Decomposition products may include the following materials: carbon dioxide, carbon monoxide, sulfur oxides and metal oxide/oxides

Special protective actions for fire-fighters: Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: For personal protective clothing requirements, please see Section 8.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has entered the environment, including waterways, soil or air. Materials can enter waterways through drainage systems.

Methods and materials for containment and cleaning up

Small spill: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of waste material by using a licensed waste disposal contractor.

Large spill: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place dust in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Large spills to waterways may be hazardous due to alkalinity of the product. Dispose of waste material using a licensed waste disposal contractor.

Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7 HANDLING AND STORAGE

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure by obtaining and following special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. Use only

with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material and keep the container tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: A key to using the product safely requires the user to recognize that portland cement reacts chemically with water to produce calcium hydroxide which can cause severe chemical burns. Every attempt should be made to avoid skin and eye contact with cement. Do not get portland cement inside boots, shoes or gloves. Do not allow wet, saturated clothing to remain against the skin. Promptly remove clothing and shoes that are dusty or wet with cement mixtures. Launder/clean clothing and shoes before reuse. Do not enter a confined space that stores or contains portland cement unless appropriate procedures and protection are available. Portland cement can build up or adhere to the walls of a confined space and then release or fall suddenly (engulfment).

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits

Ingredient name	Ingredient name
Cement, portland, chemicals	ACGIH TLV (United States, 3/2012). TWA: 1 mg/m3 8 hours. Form: Respirable fraction
	NIOSH REL (United States, 6/2009). TWA: 5 mg/m3 10 hours. Form: Respirable fraction TWA: 10 mg/m3 10 hours. Form: Total
	OSHA PEL (United States, 6/2010). TWA: 5 mg/m3 8 hours. Form: Respirable fraction TWA: 15 mg/m3 8 hours. Form: Total dust
Calcium oxide	ACGIH TLV (United States, 3/2012). TWA: 2 mg/m3 8 hours.
	NIOSH REL (United States, 6/2009). TWA: 2 mg/m3 10 hours.
	OSHA PEL (United States, 6/2010). TWA: 5 mg/m3 8 hours.
Limestone	NIOSH REL (United States, 6/2009). TWA: 5 mg/m3 10 hours. Form: Respirable fraction TWA: 10 mg/m3 10 hours. Form: Total
	OSHA PEL (United States, 6/2010). TWA: 5 mg/m3 8 hours. Form: Respirable fraction TWA: 15 mg/m3 8 hours. Form: Total dust
Magnesium oxide	ACGIH TLV (United States, 3/2012). TWA: 10 mg/m3 8 hours. Form: Inhalable fraction
	OSHA PEL (United States, 6/2010). TWA: 15 mg/m3 8 hours. Form: Total particulates
Quartz	ACGIH TLV (United States, 3/2012). TWA: 0.025 mg/m3 8 hours. Form: Respirable fraction
	NIOSH REL (United States, 6/2009). TWA: 0.05 mg/m3 10 hours. Form: respirable dust
	OSHA PEL Z-3 (United States, 9/2005). TWA: 10mg/m3 divided by %SiO2 + 2: Respirable TWA: 30mg/m3 divided by %SiO2 + 2: Total
Calcium sulfate (gypsum)	ACGIH TLV (United States, 3/2012) TWA: 10 mg/m3 8 hours. Form: Respirable fraction
	NIOSH REL (United States, 6/2009) TWA 5 mg/m3 8 hours. Form: Respirable fraction TWA 10 mg/m3 8 hours. Form: Total dust
	OSHA PEL Z-1 (United States, 2/2006) TWA 5 mg/m3 8 hours. Form: Respirable fraction TWA 15 mg/m3 8 hours. Form: Total dust

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Appropriate engineering controls: Use only with adequate ventilation. If user operations generate dust, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures: Clean water should always be readily available for skin and (emergency) eye washing. Periodically wash areas contacted by portland cement with a pH neutral soap and clean, uncontaminated water. If clothing becomes saturated with portland cement, garments should be removed and replaced with clean, dry clothing.

Eye/face protection: To prevent eye contact, wear safety glasses with side shields, safety goggles or face shields when handling dust or wet cement. Wearing contact lenses when working with cement is not recommended.

Skin protection

Hand protection: Use impervious, waterproof, abrasion and alkali-resistant gloves. Do not rely on barrier creams in place of impervious gloves. Do not get portland cement inside gloves.

Body protection: Use impervious, waterproof, abrasion and alkali-resistant boots and protective long-sleeved and longlegged clothing to protect the skin from contact with wet portland cement. To reduce foot and ankle exposure, wear impervious boots that are high enough to prevent portland cement from getting inside them. Do not get portland cement inside boots, shoes, or gloves. Remove clothing and protective equipment that becomes saturated with cement and immediately wash exposed areas of the body.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved. Footwear and other gear to protect the skin should be approved by a specialist before handling this product.

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 assigned protection factor of the selected respirator.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State: Solid. [Powder.] **Lower and upper explosive (flammable) limits:** Not applicable.

Color: White. **Vapor pressure:** Not applicable.

Odor: Odorless. **Vapor density:** Not applicable.

Odor threshold: Not available. **Relative density:** 3.0 to 3.2

pH: >11.5 [Conc. (% w/w): 1%] **Solubility:** Slightly soluble in water.

Melting point: Not available. **Solubility in water:** 0.1 to 1%

Boiling point: >1000°C (>1832°F) **Partition coefficient: n-octanol/water:** Not applicable.

Flash point: Not flammable. Not combustible. **Auto-ignition temperature:** Not applicable.

Burning time: Not available. **Decomposition temperature:** Not available.

Burning rate: Not available. **SADT:** Not available.

Evaporation rate: Not applicable. **Viscosity:** Not applicable.

Flammability (solid, gas): Not applicable.

10 STABILITY AND REACTIVITY

Reactivity: Reacts slowly with water forming hydrated compounds, releasing heat and producing a strong alkaline solution until reaction is substantially complete.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: No specific data.

Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials, acids, aluminum and ammonium salt. Portland cement is highly alkaline and will react with acids to produce a violent, heat-generating reaction. Toxic gases or vapors may be given off depending on the acid involved. Reacts with acids, aluminum metals and ammonium salts . Aluminum powder and other alkali and alkaline earth elements will react in wet mortar or concrete, liberating hydrogen gas. Limestone ignites on contact with fluorine and is incompatible with acids, alum, ammonium salts, and magnesium. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride yielding

possible fire and/or explosions. Silicates dissolve readily in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity: Portland Cement LD50/LC50 = Not available

Irritation/Corrosion:

Skin: May cause skin irritation. May cause serious burns in the presence of moisture.
Eyes: Causes serious eye damage. May cause burns in the presence of moisture.
Respiratory: May cause respiratory tract irritation.

Sensitization: May cause sensitization due to the potential presence of trace amounts of hexavalent chromium.

Mutagenicity: There are no data available.

Carcinogenicity:
Classification

Product/ingredient name	OSHA	IARC	ACGIH	NTP	
Cement, portland, chemicals		—	—	A4	—
Quartz	—	1	A2	Known to be a human carcinogen	

Reproductive toxicity: There are no data available.
Teratogenicity: There are no data available.

Specific target organ toxicity (single exposure)

Name	**Category**	**Route of Exposure**	**Target Organs**
Calcium oxide	Category 3	Inhalation and skin contact	Respiratory tract irritation, skin irritation
Cement, portland, chemicals	Category 3	Inhalation and skin contact	Respiratory tract irritation, skin irritation

Specific target organ toxicity (repeated exposure)

Name	**Category**	**Route of Exposure**	**Target Organs**
Quartz	Category 1	Inhalation	Respiratory tract and kidneys

Aspiration hazard: There are no data available.

Information on the likely routes of exposure
Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:	**Eye contact:** Causes serious eye damage. **Inhalation:** May cause respiratory irritation. **Skin contact:** Causes severe burns. May cause an allergic skin reaction. **Ingestion:** May cause burns to mouth, throat and stomach.
Symptoms related to the physical, chemical and toxicological characteristics:	**Eye contact:** Adverse symptoms may include the following: pain, watering **Inhalation:** Adverse symptoms may include the following: respiratory tractirritation, coughin **Skin contact:** Adverse symptoms may include the following: pain or irritation, redness, blistering may occur, skin burns, ulcerations and necrosis may occur **Ingestion:** Adverse symptoms may include the following: stomach pains
Delayed and immediate effects from short and long effects and also chronic term exposure:	**Short term exposure** **Potential immediate effects:** No known significant effects or critical hazards. **Potential delayed effects:** No known significant effects or critical hazards. **Long term exposure** **Potential immediate effects:** No known significant effects or critical hazards. **Potential delayed effects:** No known significant effects or critical hazards.
Potential chronic health effects:	**General:** Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.If sensitized to hexavalent chromium, a severe allergic dermal reaction may occur when subsequently exposed to very low levels. **Carcinogenicity:** Portland cement is not classifiable as a human carcinogen. Crystalline silica is considered a hazard by inhalation. IARC has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity. Excessive exposure to crystalline silica can cause silicosis, a non-cancerous lung disease. **Mutagenicity:** No known significant effects or critical hazards. **Teratogenicity:** No known significant effects or critical hazards. **Developmental effects:** No known significant effects or critical hazards. **Fertility effects:** No known significant effects or critical hazards.
Numerical measures of toxicity:	**Acute toxicity estimates:** There are no data available.

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12 ECOLOGICAL INFORMATION

Toxicity

Product/ingredient name	Result	Species	
Calcium oxide	Chronic NOEC 100mg/L Fresh water	Fish-Oreochromis niloticus-Juvenile (Fledgling, Hatchling, Weanling)	**Exposure** 46 days

Persistence and degradability: There are no data available.

Bioaccumulative potential: There are no data available.

Mobility in soil: Soil/water partition coefficient (Koc): Not available.

Other adverse effects: No known significant effects or critical hazards.

13 DISPOSAL CONSIDERATIONS

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Untreated waste should not be released to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe manner. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.

Avoid dispersal of spilled material and runoff, and contact with soil, waterways, drains and sewers.

14 TRANSPORT INFORMATION

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	—	—	—
Transport hazard class(es)	—	—	—
Packing group	—	—	—
Environmental hazards	None.	None.	None.
Additional information	—	—	—

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not available.

15 REGULATORY INFORMATION

U.S. Federal regulations: **TSCA 6 final risk management:** Chromium, ion (Cr6+)
United States inventory (TSCA 8b): Portland cements are considered to be statutory mixtures under TSCA. CAS 65997-15-1 is included on the TSCA inventory.
Clean Water Act (CWA) 307: Chromium, ion (Cr6+)
CERCLA: This product is not listed as a CERCLA substance.

Clean Air Act Section 112 (b): Hazardous Air Pollutants (HAPs) — Not listed

Clean Air Act Section 602: Class I Substances — Not listed

Clean Air Act Section 602: Class II Substances — Not listed

DEA List I Chemicals: (Precursor Chemicals) — Not listed

DEA List II Chemicals: (Essential Chemicals) — Not listed

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Classification: Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (choronic) health hazard
Calcium oxide	A-B	No	No	Yes	No
Quartz	<0.2	No	No	No	Yes
Chromium, ion (Cr6+)	<0.1	No	No	Yes	Yes
Nickel Compounds	<0.1	No	No	Yes	Yes
Lead (Organic&Inorganic)	<0.1	No	No	No	Yes

SARA 313

Form R—Reporting requirements

Product name	CAS number	%
Chromium, ion (Cr6+)	8540-29-9	< 0.1
Lead (Organic or Inorganic)	—	< 0.1
Nickel Compounds	—	< 0.1

Supplier notification: Alternatively, if any of the compounds are not present, state: This product does not contain any constituents listed under SARA Title III Section 313.

State regulations

Massachusetts: The following components are listed: cement, portland, chemicals, limestone

New York: None of the components are listed.

New Jersey: The following components are listed: cement, portland, chemicals, gypsum, limestone

Pennsylvania: The following components are listed: cement, portland, chemicals, gypsum, limestone

California Prop. 65

WARNING: This product contains crystalline silica and chemicals (trace metals) known to the State of California to cause cancer, birth defects or other reproductive harm. California law requires the above warning in the absence of definitive testing to prove the defined risks do not exist.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Quartz	Yes.	No	No	No
Chromium, ion (Cr6+)	Yes.	Yes	0.001 µg/day (inhalation)	8.2 micrograms/day (ingestion)
Nickel Compounds	No.	No	No	No
Lead	Yes.	Yes	15 µg/day (ingestion)	0.5 micrograms/day (inhalation)

International regulations

International lists:
Canadian Domestic Substances List (DSL): Portland cement is included on the DSL.
Mexico Inventory (INSQ): All components are listed or exempted.

15 OTHER INFORMATION

History

Date of issue: 15/12/2015

Version: 1

Revised Section(s): Not applicable

Notice to reader

While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of portland cement as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with portland cement to produce portland cement products. Users should review other relevant material safety data sheets before working with this portland cement or working on portland cement products, for example, portland cement concrete.

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY **ÇİMSA Cement**, except that the product shall conform to contracted specifications. The information provided herein was believed by the **ÇİMSA Cement** to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of product and to determine the suitability of the product for its intended use. Buyer's exclusive remedy shall be for damages and no claim of any kind, whether as to product delivered or for non-delivery of product, and whether based on contract, breach of warranty, negligence, or otherwise shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

Abbreviations

ACGIH — American Conference of Governmental Industrial Hygienists
CAS — Chemical Abstract Service
CERCLA — Comprehensive Emergency Response and Comprehensive Liability Act
CFR — Code of Federal Regulations
DOT — Department of Transportation
GHS — Globally Harmonized System
HEPA — High Efficiency Particulate Air
IATA — International Air Transport Association
IARC — International Agency for Research on Cancer
IMDG — International Maritime Dangerous Goods
NIOSH — National Institute of Occupational Safety and Health
NOEC — No Observed Effect Concentration
NTP — National Toxicology Program
OSHA — Occupational Safety and Health Administration
PEL — Permissible Exposure Limit
REL — Recommended Exposure Limit
RQ — Reportable Quantity
SARA — Superfund Amendments and Reauthorization Act
SDS — Safety Data Sheet
TLV — Threshold Limit Value
TPQ — Threshold Planning Quantity
TSCA — Toxic Substances Control Act
TWA — Time-Weighted Average
UN — United Nations

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Section 1. Product and Company Identification

Product Names Standard Sand & Silica, Co. Sand

Synonym Silica Sand, Quartz Sand

Supplier/ Manufacturer Standard Sand & Silica, Co.
1850 Hwy. 17-92 N.
Davenport, FL 33837
863-422-7100 phone
863-421-7349 fax

Emergency Phone Number 863-557-9411

Product Use Industrial , Construction and Agriculture

Restrictions on use Not applicable

Section 2. Hazards Identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification of the substance or mixture **OSHA - CARCINOGENICITY** (Inhalation) - Category 1A
(See section 16 for OSHA, IARC, and NTP carcinogen listings)
OSHA - SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure) (respiratory tract) (inhalation) - Category 1

Signal Word **Danger**

Hazard Statement Standard Sand is a naturally occurring mineral and contains crystalline silica levels of 98-100%.

• **CARCINOGENICITY:** This product contains crystalline silica. Repeated, prolonged inhalation of dust may cause delayed lung injury which may result in silicosis or pneumoconiosis. The International Agency For Research On Cancer in its publication, "IARC Monographs On the Evaluation Of The Carcinogenic Risk To Humans – Silica, Some Silicates, Coal Dust and Para-aramid Fibrils" - Volume 68, 1997, has concluded that there is sufficient evidence of the carcinogenicity of crystalline silica in humans, and has, therefore, classified crystalline silica in, Group 1, Carcinogenic to Humans. The National Toxicology Program's ("NTP's") Ninth Annual Report on Carcinogens 2000, lists crystalline silica (respirable) as a substance which is known to be a human carcinogen. In humans, a number of studies have found an association between lung cancer and exposure to dust containing respirable crystalline silica. In many of these studies, though not all, lung cancer risks were elevated and could not be explained by confounding factors such as cigarette smoking or arsenic or random inhalation. While the IARC working group concluded there was sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or crystobalite, it noted that carcinogenicity in humans was not detected in all circumstances studied.
ACGIH states that it is a suspected cause of cancer. Other forms of respirable crystalline silica (e.g. tridymite and cristobalite) may also be present or formed under certain industrial processes.

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GHS label elements / Hazard pictograms

Health Hazard (carcinogen)

Irritant (skin,eye & respiratory tract)

Precautionary Statements

Avoid generating dust. Do not breathe dust. Do not eat drink or smoke when using this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/ face protection. In case of inadequate ventilation, wear respiratory protection. If exposed or concerned, get medical advice/attention.

Storage Warning

Restrict of control access to stockpile areas. Engulfment hazard: To prevent burial or suffocation, do not Enter a confined space, such as a silo, bulk truck, or other storage container or vessel that stores or Contains sand with an effective procedure for assuring safety.

Unclassified Hazards

None Known

% of ingredients with unknown acute toxicity

None Known

Section 3. Composition / Information on Ingredients

Substances:

Chemical	Formula	CAS & ICSC Numbers		Percentage	
Quartz (Crystalline Silica)	SiO^2	CAS # 14808-60-7	ICSC # 0808	99.0-100.0%	

Section 4. First-Aid Measures

Description of first-aid Measures:	
First-aid measures general	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical attention.
First-aid measures after inhalation	Inhaling dust may cause discomfort in the chest, shortness of breath and coughing. Prolonged inhalation may cause chronic health effects. Prolonged or repeated inhalation of respirable crystalline silica liberated from this product can cause silicosis and may cause cancer. In cases of gross inhalation remove victim to fresh air. If breathing has stopped, perform artificial respiration. If breathing is difficult, have qualified personnel administer oxygen. Get prompt medical attention.
First-aid measures after skin contact	Remove contaminated clothing. Wash affected area with soap and warm water. Obtain medical attention if irritation persists.
First-aid measures after eye contact	Flush the eyes immediately with large amounts of running water, lifting the upper and lower lids occasionally. Remove contact lenses if present and easy to do. If irritation persists or for imbedded foreign body, get immediate medical attention.
First-aid measures after ingestion	Rinse mouth. Do NOT induce vomiting. Unlikely to be toxic by ingestion. If discomfort persists, seek medical attention.

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Most Important Symptoms and Effects, Both Acute and Delayed:	
Symptoms/injuries	Causes damage to organs through prolonged or repeated exposure (inhalation).
Symptoms/injuries after inhalation	May cause cancer by inhalation. Dust from this product may cause irritation to the respiratory tract.
Symptoms/injuries after skin contact	Prolonged contact with large amounts of dust may cause mechanical irritation.
Symptoms/injuries after eye contact	Prolonged contact with large amounts of dust may cause mechanical irritation.
Symptoms/injuries after ingestion	If a large quantity has been ingested: intestinal blockage. Gastrointestinal irritation.
Chronic symptoms	Repeated or prolonged exposure to respirable crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss. Acute silicosis can be fatal.

If exposed or concerned, get medical advice and attention.

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Section 5. Fire-Fighting Measures

National Fire Protection Association (U.S.A.)

Suitable extinguishing media	**This product is not flammable or combustible and is compatible with all extinguishing media.** **Use extinguishing media appropriate for surrounding fire.**
Unsuitable extinguishing media	No restrictions on extinguishing media for this material.
Special hazards arising from the substance or mixture	This material is not flammable and does not support fire. The paper bags and bulk bags containing the material are flammable. This product is not a combustible dust Dry powders may accumulate static charge in handling, which can be a source of ignition for flammable atmospheres.
Hazardous thermal decomposition products	This material does not contain hazardous decomposition products.
Special protective actions for fire-fighters	No special actions are necessary.
General fire hazards	No unusual fire or explosion hazards noted.
Specific Methods	Contact with powerful oxidizing agents may cause fire and/or explosions,

Section 6. Accidental Release Measures

Use of personal precautions

Avoid inhalation of dry silica dust.
Wear appropriate protective equipment when cleaning up dry silica sand dust.

Emergency procedures

There are no emergency procedures required for this material.

Methods and Materials For containment

Silica sand waste is not reactive, flammable or biodegradable. Use conventional means; e.g. sweeping, vacuum, etc.

Clean up procedures

Spilled material, where dust is generated, may overexpose Cleanup personnel to respirable crystalline silica- containing dust. Provide appropriate exhaust ventilation at places where dust is formed. Do not breath dust. Avoid prolonged exposure.
If uncontaminated, collect using dustless method (HEPA vacuum or wet method)and place in appropriate container for use. Wear appropriate respiratory protection to protect against respirable

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crystalline silica dust. If contaminated, use appropriate method for the nature of contamination, and consider possible toxic or fire hazards associated with the contaminating substances. Collect for appropriate disposal.

Environmental Precautions

Avoid discharge of fine particulate matter into drains or water Courses.

Section 7. Handling & Storage

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Keep formation of airborne dusts to a minimum. Do not rely on your sight to determine if dust is in the air. Use normal precautions against bag breakage or spills of bulk material. Use good housekeeping in storage and use areas to prevent accumulation of dust in work area. Provide adequate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure. Wear appropriate personal protective equipment and observe good industrial hygiene practices.

To reduce the risk of developing silicosis, lung cancer and other adverse health effects, the ACGIH recommends use of every means available to keep exposures below the recommended TLV. Refer to the most recent government and local regulations when selecting a respirator. Maintain, clean and fit test respirators in accordance with applicable regulations. Maintain and test ventilation and dust collection equipment. Launder clothing that has become dusty. Empty bags and containers retain silica residue and must be Handled in accordance with the provisions of this Safety Data Sheet. Warn and train employees in accordance with local, state and Federal regulations.

Dust can accumulate electrostatic charges due to friction from transfer and mixing operations and cause an electric spark (ignition source) which can ignite flammable liquids and atmospheres. Provide adequate precautions when adding this

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product to flammable and combustible mixtures like paints and coatings, such as electrical grounding and bonding, inert atmospheres or non- sparking tools. See also ASTM Standard Practice E1132-99a, "Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica. Paper bags weigh 50 lbs. Use proper lifting techniques to avoid physical injury. Bulk bags weigh 2000 lbs. Use proper equipment to lift.

Recommendations on the Conditions for safe storage

No special storage considerations, but keep in a dry location. Avoid Dust formation or accumulation.

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Section 8. Exposure Controls / Personal Protection

Chemical Name	CAS Numbers	Occupational Exposure Limits
Quartz,(Crystalline Silica) SiO^2	CAS#14808-60-7	ACGIH TLV: TWA 0.025 mg/ m^3 (respirable) OSHA PEL: .05 mg/m^3, calculated as an 8-hr TWA (respirable) CAL OSHA PEL: .05 mg/ m3, calculated an 8-hr TWA (respirable) NIOSH REL: 0.05 mg/m3 as determined by a full shift sample up to 10-hour working day, 40 hours per week.

Appropriate engineering Controls

Silica sand in moist form poses no health risk and no inhalation risk. In the event that dust is generated, use local exhaust as required to maintain exposures as far as possible below applicable occupational exposure limits. Control of exposure to dust must be accomplished as far as feasible by accepted engineering control measures (e.g., enclosure or confinement of the operation, general or local exhaust ventilation, and substitution of less toxic materials.

Recommendations for personal protective measures

Local Exhaust: When working with silica sand products, use sufficient local exhaust to reduce the level of respirable dust to the applicable standards set forth in Section III. See ACGIH "Industrial Ventilation, A Manual of Recommended Practice," latest edition.

Respiratory Protection: Dust is generated when working with dry silica sand. To minimize exposure to dust and/or crystalline silica, the mixing of dry sand products should be conducted with sufficient ventilation.
Respirable dust and quartz levels should be monitored regularly. Dust and quartz levels in excess of appropriate exposure limits should be reduced by feasible engineering controls, including (but not limited to) wet suppression, ventilation, and process enclosure. When such controls are not feasible, NIOSH/MSHA approved respirators must be worn in accordance with a respiratory protection program which meets OSHA/MSHA requirements as set forth at 29 CFR1910.134 and ANSI Z88.2-2015"Practices for Respiratory Protection".

Eye Protection: Safety glasses with side shields that are compliant with ANSI Z787.1-1989

Skin Protection: Use gloves and/or protective clothing if abrasion or allergic reactions are experienced.

Work/Hygienic Practices: Avoid creating or breathing dust Always observe good personal hygiene measures, such as washing after handling material and before eating, drinking and/or smoking. Routinely wash work clothes and protective equipment to remove containments.

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Section 9. Physical & Chemical Properties

Physical State	Granular
Appearance	Buff color in dry form
Odor	Earthy odor when wet
Odor Threshold	Not Applicable
pH	7.0
Solubility in Water	None
Melting Point	1710°C
Freezing Point	< 0 °C (<32°F)
Specific Gravity / Relative Density	2.65 g/cc
Evaporation Rate	No data available
Flash Point	Not Applicable
Auto-Ignition Temperature	Not Applicable
Decomposition Temperature	Not Applicable
Flammability	Not Applicable
Vapor Pressure	Not Applicable
Vapor Density	Not Applicable
Explosive Limits	Not Applicable
Viscosity	Not Applicable
Partition Coefficient: n-octanol/water	Not Applicable
Initial Boiling Point & Boiling Range	Not Applicable

Section 10. Stability & Reactivity

Reactivity Hazardous reactions will not occur under normal conditions.

Chemical stability Stable at standard temperature and pressure.

Possibility of hazardous reactions Hazardous polymerization will not occur.

Conditions to avoid None known.

Incompatible materials Powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, etc.

Hazardous decomposition products Silica will dissolve in hydrofluoric acid, producing a corrosive gas, silicon tetrafluoride.

Section 11. Toxicological Information

Routes of Exposure	Inhalation of silica sand dust, Ingestion
Acute Effects	
Inhalation	Aspiration of high concentrations of dry silica dust may cause mechanical irritation and discomfort. Long term exposure may cause chronic effects. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring.
Eye Contact	Not a primary eye irritant. May cause mechanical irritation.
Skin Contact/Irritation	Not a skin irritant. Not absorbed through skin.
Sensitization	Not a sensitizer

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Ingestion	Ingestion may cause gastrointestinal irritation

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Section 11. Toxicological Information

Chronic Effects	
Signs and Systems of Exposure	Exposure to dust may cause mucous membrane and respiratory irritation, cough, sore throat, nasal congestion, sneezing and shortness of breath.
Mutagenic Effects	None Known
Teratogenic Effects	None Known
Developmental Toxicity	None Known
Effects of Silicosis	**Symptoms of Silicosis**
Bronchitis/Chronic Obstructive Pulmonary Disorder. Tuberculosis – Silicosis makes an individual more susceptible to TB. Scleroderma – a disease affecting skin, blood vessels, joints and skeletal muscles. Possible renal disease.	Shortness of breath, possible fever, fatigue loss of appetite chest pain, dry cough, respiratory failure which may eventually lead to death. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop mycobacterial infections and fungal infections Inhalation of air with a very high concertation of respirable silica dust can cause the most serious forms of silicosis in a matter of months or a few years. Some epidemiological studies have concluded that there is a significant risk of developing silicosis even at airborne exposure levels that are equal to the NIOSH REL and ACGIH TLV
Remarks	
Carcinogenicity	The International Agency for Research on Cancer has determined that crystalline silica is carcinogenic to humans (Group 1). Refer to IRAC Monograph 100C (2011). The National Toxicology Program classifies respirable crystalline silica as " known to be a human carcinogen" (12th Report on Carcinogens, 2011). The ACGIH classifies crystalline silica, quartz as a suspected human carcinogen(A2)

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Other Data with Possible Relevance to Human Health	There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of disease endpoints such as scleroderma, rheumatoid arthritis, systemic lupus, erythematosus, sarcoidosis, chronic bronchitis, chronic obstructive pulmonary disease, emphysema, chronic kidney disease and end stage renal disease.
Numerical Measures of toxicity	None Known

OSHA, IARC, and NTP Carcinogen Classifications					
Chemical with Carcinogen Potential		**CAS#**	**OSHA**	**IARC**	**NTP**
Quartz, (Crystalline Silica)	SiO2	CAS # 14808-60-7	Yes	Yes - Group 1	Yes

Section 12. Ecological Information (non-mandatory)

Ecotoxicity	Not expected to be harmful to aquatic organisms. Discharging sand dust and fines into waters may increase total suspended particulate levels that can be harmful to certain aquatic organisms
Chemical oxygen demand(COD)	None Known
Products of Biodegradation	None Known
Toxicity of the products of Biodegradation	None Known
Bioaccumulation Potential	None Known
Potential to move from soil to groundwater	None Known
Other adverse effects	None Known

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13. Disposal Considerations

Personal Protection	Refer to Section 8: "Recommendations for Personal Protective Measures" when disposing of ceramic waste.
Appropriate disposal containers	Standard waste disposal containers – no specials requirements.
Appropriate disposal methods	Disposal of this product should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. In most cases, this is normal waste disposal. The generation of waste should be avoided or minimized. Dispose of non-recyclable products via a licensed waste disposal contractor. Waste packaging should be recycled. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.
Physical and chemical properties that may affect disposal	Dry silica dust should be placed in a sealed container or in a manner that reduces or eliminates the release of the product. Packaging should be recycled before disposal.
Sewage disposal	Do not dispose of into sinks or toilets. They will clog. Never dispose of this product into a sewer system.
Special precautions for landfills or incineration activities	There are no special precautions for disposal in a landfill. This product is non-combustible and is not suitable for incineration.

Section 14. Transportation Information

Regulatory Information	UN Number	UN Proper Shipping Name	Transport Hazard Class	Packing Group Number	Bulk Transport Guidance	Special Precautions
DOT Classification	Not regulated	-	-	-	-	-
TDG Classification	Not regulated	-	-	-	-	-
ADR/RID Class	Not regulated	-	-	-	-	-
IMDG Class	Not regulated	-	-	-	-	-
IATA-DGR Class	Not regulated	-	-	-	-	-

Section 15. Regulatory Information

RCRA	Crystalline Silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or it's regulations 40 CFR 261et seq.
CERCLA Section 103 Reportable Quantity	None
Clean Air Act	Crystalline silica (quartz) mined and processed by Standard Sand & Silica, Co. was not processed with or does not contain any Class I or Class II ozone depleting substances
FDA	Silica is included in the list of substances

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NTP	Respirable crystalline silica (quartz) is classified to be Known as a Human Carcinogen.
OSHA Hazard Communication Evaluation	Crystalline silica (quartz) meets criteria for hazardous Material, as defined by 29 CFR 1910.1200
California Inhalation Reference Exposure Level (REL)	California established a chronic REL ug for silica (Crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse effects are anticipated in individuals indefinitely exposed to the substance at that level.
Massachusetts Toxic Use Reduction Act	Silica, crystalline (respirable size <10 microns) is toxic For purposes of the Massachusetts Toxic Us Reduction Act.
Pennsylvania Worker and Community Right to Know Act	Quartz is a hazardous substance under the Act, but It is not a special hazardous substance or an Environmental hazardous substance.
Canada	All the components of this product are listed on the Canadian Domestic Substances List or exempt from Notification requirements. WHMIS Classification: Class D, Division 2, Subdivision A (Very Toxic Material Causing other Toxic Effects.
International Agency for Research on Cancer	Group 1
Toxic Substances Control Act (TSCA)	This chemical is listed on the TSCA Inventory, with no regulatory (SNUR or other) requirements.

National, State, provincial or local emergency planning, community right to know and other laws, regulations or ordnances may be applicable - consult applicable laws and all changes since the date of this Safety Data Sheet.

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Section 16. Other Information

Definitions

ASTM means American Society of Testing and Materials
OSHA means Occupational Safety & Health Administration
IARC means International Agency for Research on Cancer
NTP means National Toxicology Program
HCS means Hazard Communication Standard
CAS means Chemical Abstract Service
ACGIH means American Conference of Governmental Industrial Hygienists
CAL-OSHA means California OSHA, most CAL-OSHA standards defer to the federal OSHA standards
OSHA PEL means OSHA Permissible Exposure Limit
OSHA STEL means short exposure for a duration of 15 minutes, that cannot be repeated more than 4 times per day, with at least 60 minutes between exposure periods
TWA means Time Weighted Average (average exposure on the basis of an 8h/day, 40h/week work schedule)
TLV means Threshold Limit Value - American Conference of Governmental Industrial Hygienists (ACGIH)

Three types of TLVs for chemical substances as defined by the ACGIH are:

1. **TLV-TWA** - Time weighted average - average exposure on the basis of an 8h/day, 40h/week work schedule.
2. **TLV-STEL** - Short-term exposure limit - spot exposure for a duration of 15 minutes, that cannot be repeated more than 4 times per day, with at least 60 minutes between exposure periods.
3. **TLV-C** - Ceiling limit - absolute exposure limit that should not be exceeded at any time.
4. **NFPA Hazard Rating**: Health: 1 Fire: 0 Reactivity: 0

This SDS is in compliance with The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) – June 1, 2015. This data sheet is subject to change without notice.

Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or in violation of any law or regulation. It is the user's responsibility to determine for their self; the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.