



# Safety Data Sheet

## 1 IDENTIFICATION

<b>Product identifier</b>	24/6 Concrete Mix
<b>Other means of identification</b>	
<b>Product code</b>	601010050
<b>Recommended use</b>	Industrial use
<b>Recommended restrictions</b>	Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Company name</b>	CTS Cement Manufacturing Corporation
<b>Address</b>	12442 Knott Street Garden Grove, CA 92841 United States
<b>Telephone</b>	1-800-929-3030
<b>E-mail</b>	<a href="mailto:info@ctscement.com">info@ctscement.com</a>
<b>Contact person</b>	Safety Officer
<b>Emergency telephone number</b>	1-800-929-3030 (8 AM - 5 PM)

## 2 HAZARDS IDENTIFICATION

<b>Physical hazards</b>	Not classified	
<b>Health Hazards</b>	Skin corrosion/irritation	Category 1
	Skin sensitizer	Category 1B
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 1A
	Specific Target Organ Toxicity, Single Exposure	Category 3: respiratory tract irritation
	Specific Target Organ Toxicity, Repeated Exposure	Category 1: lungs
<b>OSHA defined hazards</b>	Not classified	
<b>Label elements</b>		
<b>Pictogram(s):</b>		
<b>Signal Word</b>	Danger	

<b>Hazard statement</b>	Causes skin irritation. Causes serious eye damage. May cause cancer. May cause respiratory irritation. May cause damage to organs (Lungs) through prolonged or repeated exposure.
<b>Precautionary statement</b>	
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash thoroughly after handling. Use in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	If exposed or concerned: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
<b>Storage</b>	Keep container tightly closed. Store in dry location.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national /international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.

### 3 COMPOSITIONS/INFORMATION ON INGREDIENTS

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#### Mixtures

Chemical name	CAS number	Concentration
Portland cement	65997-15-1	15 - 30
Silica sand, quartz	14808-60-7	30 - 80
Sodium hydroxide	1310-73-2	0 - 0.1

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4 FIRST-AID MEASURES

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<b>Inhalation</b>	If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Remove contaminated clothing. Wash with plenty of soap and water. Do not use an organic solvent. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

<b>Ingestion</b>	Immediately rinse mouth and drink plenty of water. Call an ambulance and take these instructions. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Upper respiratory tract irritation. Coughing. Discomfort in the chest. Shortness of breath. Wheezing. Skin irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

## 5 FIRE-FIGHTING MEASURES

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<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Carbon monoxide, carbon dioxide, harmful vapors, nitrogen oxides. Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire. Dusty conditions may ignite explosively in the presence of an ignition source, causing flash fire.
<b>Special protective equipment</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Firefighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials. The degree of risk is governed by the burning substance and the fire conditions. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.
<b>General fire hazards</b>	Dusty conditions may ignite explosively in the presence of an ignition source, causing flash fire.

## 6 ACCIDENTAL RELEASE MEASURES

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<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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<b>Methods and materials for containment and cleaning up</b>	Stop the flow of material, if this is without risk. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Collect dust using a vacuum cleaner. Minimize dust generation and accumulation. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.
<b>Further accidental release measures</b>	Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Avoid the formation and build-up of dust - danger of dust explosion. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition.

## 7 HANDLING AND STORAGE

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<b>Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide appropriate exhaust ventilation at places where dust is formed. Avoid dust formation. Breathing must be protected when large quantities are decanted without local exhaust ventilation. Do not breathe dust. Do not get this material in contact with eyes. Avoid prolonged exposure. Ground all equipment. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>Protection against fire and explosion</b>	Avoid dust formation. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in original tightly closed container. Store in a cool, dry location. Store away from incompatible materials (see Section 10 of the SDS).

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational exposure limits

#### US. OSHA PEL (29 CFR 1910.1000)

Components	Type	Value	Form
Silica, quartz (CAS 14808-60-7)	TWA	0.3 mg/m <sup>3</sup>	Total dust
	TWA	0.1 mg/m <sup>3</sup>	Respirable fraction
Portland cement (CAS 65997-15-1)	PEL	5 mg/m <sup>3</sup>	Respirable fraction
	PEL	15 mg/m <sup>3</sup>	Total dust
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m <sup>3</sup>	Respirable fraction
	STEL	2 mg/m <sup>3</sup>	Respirable fraction

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Silica, quartz (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction
Portland cement (CAS 65997-15-1)	TWA	10 mg/m <sup>3</sup>	Respirable fraction*
Sodium hydroxide (CAS 1310-73-2)	STEL	2 mg/m <sup>3</sup>	Respirable fraction

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Silica, quartz (CAS 14808-60-7)	TWA	0.05 mg/m <sup>3</sup>	Respirable fraction

\*The value is for particulate matter containing no asbestos and <1% crystalline silica.

#### Biological limit values

No biological exposure limits noted for the ingredient(s).

#### Exposure guidelines

Occupational exposure to nuisance dust (total and respirable) should be monitored and controlled.

#### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. Eye wash facilities and emergency shower must be available when handling this product.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Wear safety glasses or safety goggles unless full face respirator is in use.

##### Skin protection

##### Hand protection

Wear appropriate chemical resistant gloves.

##### Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

##### Respiratory protection

Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

##### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Avoid inhalation of dusts. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Avoid exposure - obtain special instructions before use. Handle in accordance with good building materials hygiene and safety practice. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

## 9 PHYSICAL AND CHEMICAL PROPERTIES

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**Appearance**

<b>Physical state</b>	Solid
<b>Form</b>	Powder
<b>Color</b>	Gray
<b>Odor</b>	Low
<b>Odor threshold</b>	Not available
<b>pH</b>	10 – 12 when wet
<b>Melting point/freezing point</b>	Not applicable
<b>Initial boiling point and boiling range</b>	Not applicable
<b>Flash point</b>	Not applicable
<b>Evaporation rate</b>	Not applicable
<b>Flammability (solid, gas)</b>	Not combustible

**Upper/lower flammability or explosive limits**

<b>Flammability limit – lower (%)</b>	Not applicable
<b>Flammability limit – upper (%)</b>	Not applicable

<b>Vapor pressure</b>	Not applicable
<b>Vapor density</b>	Not applicable
<b>Relative density</b>	2.6-3.1 @ 20°C

**Solubility(ies)**

<b>Solubility (water)</b>	soluble at 20 °C
<b>Partition coefficient (n-octanol/water)</b>	No applicable information available

**Decomposition temperature** No decomposition if stored and handled as prescribed/indicated

**Viscosity** Not applicable

**Other information**

<b>Bulk density</b>	1000 kg/m <sup>3</sup>
<b>Partition coefficient (oil/water)</b>	Not applicable

VOC (weight %)

Not tested

## 10 STABILITY AND REACTIVITY

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<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage, and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use. Strong bases are formed on the addition of water
<b>Conditions to avoid</b>	Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Avoid humidity.
<b>Incompatible materials</b>	Powerful oxidizers, acids, bases.
<b>Hazardous decomposition products</b>	
<b>Decomposition products</b>	Silica will dissolve in hydrofluoric acid and produce corrosive gas. Possible separation of formaldehyde in very small quantities.
<b>Thermal decomposition</b>	No decomposition if stored and handled as prescribed/indicated

## 11 TOXICOLOGICAL INFORMATION

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### Information on likely routes of exposure

<b>Inhalation</b>	May cause damage to organs through prolonged or repeated exposure by inhalation. Inhalation of dusts may cause respiratory irritation. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation. Prolonged contact with wet cement/mixture may cause burns.
<b>Eye contact</b>	Causes serious eye damage. Prolonged contact with wet cement/mixture may cause burns.
<b>Ingestion</b>	Harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.
<b>Symptoms related to the physical, chemical, and toxicological characteristics</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Upper respiratory tract irritation. Coughing. Discomfort in the chest. Shortness of breath. Wheezing. Skin irritation.

### Information on toxicological effects

**Acute toxicity** May cause respiratory irritation.

Components	Species	Test Results
Sodium hydroxide (CAS 1310-73-2)	mouse	Oral LD50: 5800 mg/kg

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye damage.

**Respiratory or skin sensitization**

<b>Respiratory sensitization</b>	Based on available Data, the classification criteria are not met.	
<b>Skin sensitization</b>	Based on available Data, the classification criteria are not met.	
<b>Germ cell mutagenicity</b>	The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.	
<b>Carcinogenicity</b>	<p>May cause cancer.</p> <p>In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.</p>	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	Amorphous Silica; Silica dioxide (CAS 61790-53-2)	3 Not classifiable as to
<b>NTP Report on Carcinogens</b>	Silica, quartz (CAS 14808-60-7)	1 Carcinogenic to humans.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	Silica, quartz (CAS 14808-60-7)	Known To Be Human Carcinogen.
<b>Reproductive toxicity</b>	Not listed	
<b>Specific target organ toxicity – single exposure</b>	May damage fertility or the unborn child.	
<b>Specific target organ toxicity – repeated exposure</b>	May cause respiratory irritation.	
<b>Aspiration hazard</b>	May cause damage to organs (lungs) through prolonged or repeated exposure.	
<b>Chronic effects</b>	Due to the physical form of the product it is not an aspiration hazard.	
	Prolonged or repeated exposure may cause lung injury. May cause skin disorders if contact is repeated or prolonged.	



## 12 ECOLOGICAL INFORMATION

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<b>Ecotoxicity</b>	May cause long-term adverse effects to the aquatic environment. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or un-neutralized.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13 DISPOSAL CONSIDERATIONS

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<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. Do not discharge into drains/surface waters/groundwater.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14 TRANSPORT INFORMATION

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<b>USDOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable

# 15 REGULATORY INFORMATION

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Released/listed

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Chemical name	CAS number	RCRA Waste No.	Reportable Quantities
Sodium hydroxide	1310-73-2		1000 lbs

**Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories**

Immediate Hazard - Yes  
 Delayed Hazard - Yes  
 Fire Hazard – No  
 Pressure Hazard – No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Concentration
<b>SARA 311/312 Hazardous chemical</b>		
	Yes	
<b>SARA 313 (TRI reporting)</b>		
	Not regulated	

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated

**Safe Drinking Water Act (SDWA)**

Not regulated

**US state regulations**

**US. Massachusetts RTK – Substance List**

Chemical name	CAS number	Concentration
Silica, quartz	14808-60-7	20 - 60

**US. New Jersey Worker and Community Right-to-Know Act**

Chemical name	CAS number	Concentration
Silica, quartz	14808-60-7	20 - 60

**US. Pennsylvania Worker and Community Right-to-Know Law**

Chemical name	CAS number	Concentration
Silica, quartz	14808-60-7	20 - 60

**US. Rhode Island RTK**

<b>Chemical name</b>	<b>CAS number</b>	<b>Concentration</b>
Silica, quartz	14808-60-7	20 - 60

**US. California Proposition 65**

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

** WARNING**

CANCER and REPRODUCTIVE HARM - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16 OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF LAST REVISION**

<b>Issue date</b>	4 June 2018
<b>Revision date</b>	4 June 2018
<b>Version #</b>	02
<b>HMIS® ratings</b>	Health: 3 Flammability: 1 Physical hazard: 0
<b>Disclaimer</b>	CTS Cement Manufacturing Corporation cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.