

MasterFlow 4316

Version 1.0 Revision Date: 07/27/2020 SDS Number: 000000539831 Date of last issue: -
Date of first issue: 07/27/2020

SECTION 1. IDENTIFICATION

Product name : MasterFlow 4316
Product code : 000000000050434854 000000000050434854

Manufacturer or supplier's details

Company name of supplier : Master Builders-Construction Systems
US, LLC
Address : 23700 CHAGRIN BLVD
Beachwood OH 44122
Emergency telephone : ChemTel: +1-813-248-0585

Recommended use of the chemical and restrictions on use

Recommended use : Product for construction chemicals
Restrictions on use : Reserved for industrial and professional use.

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with 29 CFR 1910.1200**

Skin corrosion/irritation : 2
Serious eye damage/eye irritation : Category 1
Carcinogenicity (Inhalation) : 1A (Lung)
Specific target organ toxicity - repeated exposure (Inhalation) : 2 (Kidney, Immune system)
Specific target organ toxicity - single exposure : 3 (Respiratory system)
Specific target organ toxicity - repeated exposure (Inhalation) : Category 1

GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H318 Causes serious eye damage.

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H315 Causes skin irritation.
 H335 May cause respiratory irritation.
 H350 May cause cancer.
 H372 Causes damage to organs through prolonged or repeated exposure if inhaled.

Precautionary Statements

:

Prevention:

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P201 Obtain special instructions before use.
 P271 Use only outdoors or in a well-ventilated area.
 P260 Do not breathe dust or mist.
 P202 Do not handle until all safety precautions have been read and understood.
 P270 Do not eat, drink or smoke when using this product.
 P264 Wash face, hands and any exposed skin thoroughly after handling.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
 P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.

Disposal:

P501 Dispose of contents/container to appropriate hazardous waste collection point.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : No applicable information available.

Components

Chemical name	CAS-No.	Concentration (% w/w)
Cement, portland, chemicals	65997-15-1	>= 25 - < 75
calcium oxide	1305-78-8	>= 1 - < 7
Quartz (SiO ₂)	14808-60-7	>= 0 - < 3
Iron oxide	1309-37-1	>= 0 - < 10

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magnesium oxide	1309-48-4	>= 0 - < 3
Limestone	1317-65-3	>= 0 - < 7
Silicon dioxide	7631-86-9	>= 1 - < 5
Calcium sulphate	7778-18-9	>= 0 - < 7
Gypsum (Ca(SO ₄).2H ₂ O)	13397-24-5	>= 0 - < 3

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
 Consult a physician.
 Show this material safety data sheet to the doctor in attendance.
 Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.
 If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : If skin irritation persists, call a physician.
 If on skin, rinse well with water.
 If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
 In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 Continue rinsing eyes during transport to hospital.
 Remove contact lenses.
 Protect unharmed eye.
 Keep eye wide open while rinsing.
 If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
 Do NOT induce vomiting.
 Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.
 Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : Causes skin irritation.
 Causes serious eye damage.
 May cause respiratory irritation.
 May cause cancer.
 Causes damage to organs through prolonged or repeated exposure if inhaled.
- Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Foam
 Dry powder
 Water spray

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Carbon dioxide (CO₂)

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Neutralize with acid.
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.

Advice on safe handling : Avoid formation of respirable particles.
Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

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Further information on storage conditions : Containers should be stored tightly sealed in a dry place.

Materials to avoid : Segregate from metals.
 Segregate from acids and bases.
 Segregate from oxidants.
 Segregate from foods and animal feeds.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
calcium oxide	1305-78-8	TWA value	2 mg/m ³	ACGIHTLV
		REL value	2 mg/m ³	NIOSH
		PEL	5 mg/m ³	29 CFR 1910.1000 (Table Z-1)
		TWA value	5 mg/m ³	29 CFR 1910.1000 (Table Z-1-A)
		TWA	2 mg/m ³	ACGIH
		TWA	2 mg/m ³	NIOSH REL
		TWA	5 mg/m ³	OSHA Z-1
Iron oxide	1309-37-1	TWA	5 mg/m ³	OSHA P0
		TWA value (Respirable fraction)	5 mg/m ³	ACGIHTLV
		REL value (Dust and fume)	5 mg/m ³ (iron (Fe))	NIOSH
		PEL (fumes/smoke)	10 mg/m ³	29 CFR 1910.1000 (Table Z-1)
		TWA value (fumes/smoke)	10 mg/m ³	29 CFR 1910.1000 (Table Z-1-A)
		TWA (Respirable particulate matter)	5 mg/m ³	ACGIH
		TWA (dust and fume)	5 mg/m ³ (Iron)	NIOSH REL
		TWA (Fumes)	10 mg/m ³	OSHA Z-1
		TWA (total dust)	15 mg/m ³	OSHA Z-1

SAFETY DATA SHEET

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		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Fumes)	10 mg/m3	OSHA P0
magnesium oxide	1309-48-4	TWA value (Inhalable fraction)	10 mg/m3	ACGIHTLV
		PEL (Total particulate)	15 mg/m3	29 CFR 1910.1000 (Table Z-1)
		TWA value (Total particulate)	10 mg/m3	29 CFR 1910.1000 (Table Z-1-A)
		TWA (Inhalable particulate matter)	10 mg/m3	ACGIH
		TWA (fume, total particulate)	15 mg/m3	OSHA Z-1
		TWA (Fume - total particulate)	10 mg/m3	OSHA P0
Limestone	1317-65-3	REL value (Respirable)	5 mg/m3	NIOSH
		REL value (Total)	10 mg/m3	NIOSH
		PEL (Respirable fraction)	5 mg/m3	29 CFR 1910.1000 (Table Z-1)
		PEL (Total dust)	15 mg/m3	29 CFR 1910.1000 (Table Z-1)
		TWA value (Respirable fraction)	5 mg/m3	29 CFR 1910.1000 (Table Z-1-A)
		TWA value (Total dust)	15 mg/m3	29 CFR 1910.1000 (Table Z-1-A)
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	15 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
		TWA (Respirable)	5 mg/m3 (Calcium carbonate)	NIOSH REL
		TWA (total)	10 mg/m3 (Calcium carbonate)	NIOSH REL
Silicon dioxide	7631-86-9	REL value	6 mg/m3	NIOSH

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		TWA value	6 mg/m ³	29 CFR 1910.1000 (Table Z-1-A)
		TWA value	20 millions of particles per cubic foot of air	29 CFR 1910.1000 (Table Z-3)
		TWA value	0.8 mg/m ³	29 CFR 1910.1000 (Table Z-3)
		TWA (Dust)	20 Million parti- cles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m ³ / %SiO ₂ (Silica)	OSHA Z-3
		TWA (Res- pirable dust)	0.05 mg/m ³ (Silica)	NIOSH REL
		TWA	6 mg/m ³ (Silica)	NIOSH REL
Calcium sulphate	7778-18-9	TWA value (Inhalable fraction)	10 mg/m ³	ACGIHTLV
		REL value (Respirable)	5 mg/m ³	NIOSH
		REL value (Total)	10 mg/m ³	NIOSH
		PEL (Respir- able fraction)	5 mg/m ³	29 CFR 1910.1000 (Table Z-1)
		PEL (Total dust)	15 mg/m ³	29 CFR 1910.1000 (Table Z-1)
		TWA value (Respirable fraction)	5 mg/m ³	29 CFR 1910.1000 (Table Z-1-A)
		TWA value (Total dust)	15 mg/m ³	29 CFR 1910.1000 (Table Z-1-A)
		TWA (Res- pirable)	5 mg/m ³	NIOSH REL
		TWA (total)	10 mg/m ³	NIOSH REL
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respir- able fraction)	5 mg/m ³	OSHA Z-1
		TWA (Total dust)	15 mg/m ³	OSHA P0
		TWA (respir- able dust fraction)	5 mg/m ³	OSHA P0
		TWA (Inhal- able particu- late matter)	10 mg/m ³ (Calcium)	ACGIH
Gypsum (Ca(SO ₄).2H ₂ O)	13397-24-5	TWA value	10 mg/m ³	ACGIHTLV

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		(Inhalable fraction)		
		REL value (Respirable)	5 mg/m3	NIOSH
		REL value (Total)	10 mg/m3	NIOSH
		PEL (Total dust)	15 mg/m3	29 CFR 1910.1000 (Table Z-1)
		PEL (Respirable fraction)	5 mg/m3	29 CFR 1910.1000 (Table Z-1)
		TWA value (Total dust)	15 mg/m3	29 CFR 1910.1000 (Table Z-1-A)
		TWA value (Respirable fraction)	5 mg/m3	29 CFR 1910.1000 (Table Z-1-A)
		TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	15 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
		TWA (Inhalable particulate matter)	10 mg/m3 (Calcium)	ACGIH
Quartz (SiO ₂)	14808-60-7	TWA value (Respirable fraction)	0.025 mg/m3	ACGIHTLV
		TWA value	0.05 mg/m3 (Respirable dust)	29 CFR 1910.1001-1050
		OSHA Action level	0.025 mg/m3 (Respirable dust)	29 CFR 1910.1001-1050
		REL value (Respirable dust)	0.05 mg/m3	NIOSH
		TWA (Respirable dust)	0.05 mg/m3	OSHA Z-1
		TWA (respirable)	10 mg/m3 / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO ₂ +5	OSHA Z-3
		TWA (respirable dust fraction)	0.1 mg/m3	OSHA P0

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		TWA (Respirable particulate matter)	0.025 mg/m ³ (Silica)	ACGIH
		PEL (respirable)	0.05 mg/m ³	OSHA CARC
		TWA (Respirable dust)	0.05 mg/m ³ (Silica)	NIOSH REL
Cement, portland, chemicals	65997-15-1	TWA value (Respirable fraction)	1 mg/m ³	ACGIHTLV
		REL value (Total)	10 mg/m ³	NIOSH
		REL value (Respirable)	5 mg/m ³	NIOSH
		PEL (Total dust)	15 mg/m ³	29 CFR 1910.1000 (Table Z-1)
		PEL (Respirable fraction)	5 mg/m ³	29 CFR 1910.1000 (Table Z-1)
		TWA value (Total dust)	10 mg/m ³	29 CFR 1910.1000 (Table Z-1-A)
		TWA value (Respirable fraction)	5 mg/m ³	29 CFR 1910.1000 (Table Z-1-A)
		TWA value	50 millions of particles per cubic foot of air	29 CFR 1910.1000 (Table Z-3)
		TWA (Respirable particulate matter)	1 mg/m ³	ACGIH
		TWA (Respirable)	5 mg/m ³	NIOSH REL
		TWA (total)	10 mg/m ³	NIOSH REL
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
		TWA (Total dust)	10 mg/m ³	OSHA P0
		TWA (respirable dust fraction)	5 mg/m ³	OSHA P0
		TWA (Dust)	50 Million particles per cubic foot	OSHA Z-3
Quartz (SiO ₂)	14808-60-7	TWA value (Respirable fraction)	0.025 mg/m ³	ACGIHTLV
		REL value (Respirable dust)	0.05 mg/m ³	NIOSH

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		TWA value	0.05 mg/m3 (Respirable dust)	29 CFR 1910.1001- 1050
		OSHA Action level	0.025 mg/m3 (Respirable dust)	29 CFR 1910.1001- 1050
		TWA (Respirable dust)	0.05 mg/m3	OSHA Z-1
		TWA (respirable)	10 mg/m3 / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO ₂ +5	OSHA Z-3
		TWA (respirable dust fraction)	0.1 mg/m3	OSHA P0
		TWA (Respirable particulate matter)	0.025 mg/m3 (Silica)	ACGIH
		PEL (respirable)	0.05 mg/m3	OSHA CARC
		TWA (Respirable dust)	0.05 mg/m3 (Silica)	NIOSH REL

Engineering measures : Provide local exhaust ventilation to maintain recommended P.E.L.

Personal protective equipment

Respiratory protection : Breathing protection if dusts are formed.
Wear a NIOSH-certified (or equivalent) particulate respirator.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Protective measures : Avoid contact with the skin, eyes and clothing.
Avoid inhalation of dusts.
In order to prevent contamination while handling, closed working clothes and working gloves should be used.
Handle in accordance with good building materials hygiene and safety practice.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder
Color	:	gray
Odor Threshold	:	Not determined due to potential health hazard by inhalation.
pH	:	13 (68 °F / 20 °C) (as aqueous solution)
Boiling point	:	No applicable information available.
Flash point	:	does not flash
Evaporation rate	:	No applicable information available.
Flammability (solid, gas)	:	not determined
Self-ignition	:	not self-igniting
Upper explosion limit / Upper flammability limit	:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Lower explosion limit / Lower flammability limit	:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Vapor pressure	:	No applicable information available.
Relative vapor density	:	No applicable information available.
Relative density	:	No applicable information available.
Bulk density	:	1.25 g/m ³
Solubility(ies)		
Water solubility	:	insoluble (59 °F / 15 °C)
Solubility in other solvents	:	No applicable information available.
Partition coefficient: n-octanol/water	:	No applicable information available.
Autoignition temperature	:	No applicable information available.
Decomposition temperature	:	No decomposition if stored and handled as prescribed/indicated.

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Viscosity
 Viscosity, dynamic : No applicable information available.
 Viscosity, kinematic : No applicable information available.
Explosive properties : Not explosive

Oxidizing properties : Not an oxidizer.
Self-heating substances : No data available
Sublimation point : No applicable information available.
Molecular weight : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.
Chemical stability : No decomposition if stored and applied as directed.
Possibility of hazardous reactions : No decomposition if stored and applied as directed.
Conditions to avoid : See SDS section 7 - Handling and storage.
Incompatible materials : Strong bases
 : Strong acids
Hazardous decomposition products : No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Not classified based on available information.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization**Skin sensitization**

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

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Product:

Remarks : Chromate in this product has been reduced. Sensitization due to chromate within stated shelf-life is unlikely.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

May cause cancer.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure if inhaled.

Aspiration toxicity

Not classified based on available information.

Further information**Product:**

Remarks : The product has not been tested. The statement has been derived from the properties of the individual components.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:****Ecotoxicology Assessment**

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Persistence and degradability**Product:**

Biodegradability : Remarks: not applicable

Bioaccumulative potential**Product:**

Bioaccumulation : Remarks: The product will not be readily bioavailable due to its consistency and insolubility in water.

Components:

Cement, portland, chemicals:

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Partition coefficient: n-octanol/water : GLP: no
Remarks: not applicable

calcium oxide:

Partition coefficient: n-octanol/water : Remarks: The value has not been determined because the substance is inorganic.

Quartz (SiO₂):

Partition coefficient: n-octanol/water : Remarks: not applicable

Iron oxide:

Partition coefficient: n-octanol/water : Remarks: Study scientifically not justified.

magnesium oxide:

Partition coefficient: n-octanol/water : Remarks: No data available.

Silicon dioxide:

Partition coefficient: n-octanol/water : Remarks: not applicable

Calcium sulphate:

Partition coefficient: n-octanol/water : GLP: no
Remarks: The value has not been determined because the substance is inorganic.

Gypsum (Ca(SO₄).2H₂O):

Partition coefficient: n-octanol/water : Remarks: The value has not been determined because the substance is inorganic.

Mobility in soil**Product:**

Distribution among environmental compartments : Remarks: Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.
The substance will not evaporate into the atmosphere from the water surface.

Other adverse effects**Product:**

Results of PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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Additional ecological information : Observe allowable values of impurities of effluents discharged in water and soil (according regulation of ministry of the environment from November, 18th , 2014, law gazette pos. 1800 (Poland)

Do not discharge product into the environment without control. The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of in accordance with national, state and local regulations.
Do not discharge into drains/surface waters/groundwater.

Contaminated packaging : Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**49 CFR**

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION**US State Regulations****Pennsylvania Right To Know**

calcium oxide	1305-78-8
Iron oxide	1309-37-1
magnesium oxide	1309-48-4
Limestone	1317-65-3
Silicon dioxide	7631-86-9

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Calcium sulphate	7778-18-9
Gypsum (Ca(SO4).2H2O)	13397-24-5
Quartz (SiO2)	14808-60-7
Cement, portland, chemicals	65997-15-1
Quartz (SiO2)	14808-60-7

New Jersey Right To Know

calcium oxide	1305-78-8
magnesium oxide	1309-48-4
Limestone	1317-65-3
Calcium sulphate	7778-18-9
Cement, portland, chemicals	65997-15-1
Quartz (SiO2)	14808-60-7

California Prop. 65

WARNING: This product can expose you to chemicals including Quartz (SiO2), which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

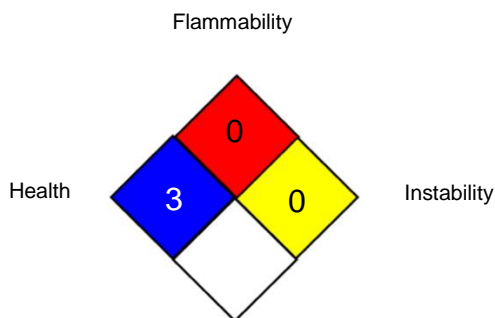
The ingredients of this product are reported in the following inventories:

- DSL : All components of this product are on the Canadian DSL
- TSCA : All chemical substances in this product are either listed as active on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:

HEALTH		
FLAMMABILITY		
PHYSICAL HAZARD		

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

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29 CFR 1910.1000 (Table Z-1-A)	:	OSHA - Table Z-1-A (29 CFR 1910.1000)
29 CFR 1910.1000 (Table Z-1)	:	OSHA - Table Z-1 (Limits for Air Contaminants) 29 CFR 1910.1000
29 CFR 1910.1000 (Table Z-3)	:	OSHA Table Z-3 (Mineral Dusts) 29 CFR 1910.1000
29 CFR 1910.1001-1050	:	OSHA - Specifically Regulated Substances (29 CFR 1910.1001-1050)
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIHTLV	:	American Conference of Governmental Industrial Hygienists - threshold limit values (US)
NIOSH	:	NIOSH Pocket Guide to Chemical Hazards (US)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA CARC	:	OSHA Specifically Regulated Chemicals/Carcinogens
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
29 CFR 1910.1000 (Table Z-1-A) / TWA value	:	Time Weighted Average (TWA):
29 CFR 1910.1000 (Table Z-1) / PEL	:	Permissible exposure limit
29 CFR 1910.1000 (Table Z-3) / TWA value	:	Time Weighted Average (TWA):
29 CFR 1910.1001-1050 / OSHA Action level	:	OSHA Action level:
29 CFR 1910.1001-1050 / TWA value	:	Time Weighted Average (TWA):
ACGIH / TWA	:	8-hour, time-weighted average
ACGIHTLV / TWA value	:	Time Weighted Average (TWA):
NIOSH / REL value	:	Recommended exposure limit (REL):
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA CARC / PEL	:	Permissible exposure limit (PEL)
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-3 / TWA	:	8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI -

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Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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