

SAFETY DATA SHEET

HIGH-CALCIUM LIME KILN DUST

Section 1. Identification

GHS product identifier : HIGH-CALCIUM LIME KILN DUST

Product code : Not available.

Other means of identification

: High Calcium Lime Kiln Dust, Lime Kiln Dust, LKD.

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Neutralization, Stabilization, Absorption, Biosolids Stabilisation.

Supplier/Manufacturer : GRAYMONT

#200-10991 Shellbridge Way Richmond, BC V6X 3C6

Canada

Phone: 1 604 207-4292 Toll free: 1 866 207-4292 Fax: 1 604 207-9014

Web Site: http://www.graymont.com/

Emergency telephone number (with hours of

operation)

: CHEMTREC, US (800-424-9300) INTERNATIONAL: (703-527-3887)

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

: SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

CARCINOGENICITY - Category 1A

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

GHS label elements

Hazard pictograms







Signal word : Danger



Section 2. Hazards identification

Hazard statements : H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H335 - May cause respiratory irritation. H350 - May cause cancer. (inhalation)

H372 - Causes damage to organs through prolonged or repeated exposure. (respiratory

tract)

Precautionary statements

Prevention: P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P280 - Wear protective gloves, protective clothing and eye or face protection.

P271 - Use only outdoors or in a well-ventilated area.

P260 - Do not breathe dust.

P270 - Do not eat, drink or smoke when using this product.

P264 - Wash thoroughly after handling.

Response : P308 + P313 - IF exposed or concerned: Get medical advice or attention.

P304 + P340, P312 - IF INHALED: Remove person to fresh air and keep comfortable

for breathing. Call a POISON CENTER or doctor if you feel unwell. P362 + P364 - Take off contaminated clothing and wash it before reuse.

P302 + P352 - IF ON SKIN: Wash with plenty of water.

P332 + P313 - If skin irritation occurs: Get medical advice or attention.

P305 + P351 + P338, P310 - 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 or doctor.

Storage: P401 - Store to minimize dust generation.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national

and international regulations.

Hazards not otherwise

classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Other means of identification

: High Calcium Lime Kiln Dust, Lime Kiln Dust, LKD.

Ingredient name	%	CAS number
Limestone	≥90	1317-65-3
Calcium oxide	0 - 55	1305-78-8
Magnesium oxide	≥5 - ≤10	1309-48-4
Calcium Hydroxide	1 - 5	1305-62-0
Crystalline silica, respirable powder	0.0001 - 1	14808-60-7

Crystalline silica has been found in some products at or above detection level 0.1%. Concentration is dependent upon limestone source and fuel type.

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

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.





Section 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

: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If 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. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

: Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. 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. Loosen tight clothing such as a collar, tie, belt or waistband.

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 skin irritation.

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

pain watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

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





Section 4. First aid measures

Notes to physician

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

Specific treatments

: No specific treatment.

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

: None known.

Specific hazards arising from the chemical

: No specific fire or explosion hazard.

Hazardous thermal decomposition products

Decomposition products may include the following materials: carbon dioxide

metal oxide/oxides

Special protective actions for fire-fighters

: Move containers from fire area if this can be done without risk.

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.

Section 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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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 caused environmental pollution (sewers, waterways or air).

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 via a licensed waste disposal contractor.





Section 6. Accidental release measures

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 in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain 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 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, kept 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. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store to minimize dust generation. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Limestone	OSHA PEL (United States, 5/2018).
	TWA: 5 mg/m³ 8 hours. Form: Respirable
	fraction
	TWA: 15 mg/m³ 8 hours. Form: Total dust NIOSH REL (United States, 10/2016).
	TWA: 5 mg/m³ 10 hours. Form: Respirable
	fraction
	TWA: 10 mg/m³ 10 hours. Form: Total
Calcium oxide	ACGIH TLV (United States, 3/2019).
	TWA: 2 mg/m³ 8 hours.
	NIOSH REL (United States, 10/2016). TWA: 2 mg/m³ 10 hours.
	OSHA PEL (United States, 5/2018).
	TWA: 5 mg/m ³ 8 hours.
Magnesium oxide	ACGIH TLV (United States, 3/2019).
	TWA: 10 mg/m³ 8 hours. Form: Inhalable
	fraction
	OSHA PEL (United States, 5/2018).
	TWA: 15 mg/m³ 8 hours. Form: Total
Calcium Hydroxide	particulates ACGIH TLV (United States, 3/2019).
Calcium Hydroxide	Acomi i Ly (officed States, 5/2019).



Section 8. Exposure controls/personal protection

TWA: 5 mg/m³ 8 hours.

OSHA PEL (United States, 5/2018).

TWA: 5 mg/m³ 8 hours. Form: Respirable

fraction

TWA: 15 mg/m³ 8 hours. Form: Total dust NIOSH REL (United States, 10/2016).

TWA: 5 mg/m³ 10 hours.

Crystalline silica, respirable powder OSHA PEL Z3 (United States, 6/2016).

TWA: 250 mppcf 8 hours. Form: Respirable TWA: 10 mg/m³ 8 hours. Form: Respirable TWA: 5 mg/m3 Form: Respirable fraction

TWA: 15 mg/m3 Form: Total dust NIOSH REL (United States, 10/2016).

TWA: 0.05 mg/m³ 10 hours. Form: Respirable

dust

TWA: 5 mg/m3 Form: Respirable fraction TWA: 10 mg/m3 Form: Total dust **OSHA PEL (United States, 5/2018).**

TWA: 50 μg/m³ 8 hours. Form: Respirable

dust

ACGIH TLV (United States, 3/2019).

TWA: 0.025 mg/m³ 8 hours. Form: Respirable

fraction

MSHA PEL

TWA 8/40 hours:

30 mg/m3/(%SiO2)+2 mg/m3 Form: Total dust

10 mg/m3/(%SiO2)+2 mg/m3 Form:

Respirable dust

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Engineering controls may be required to control the primary or secondary risks associated with this product.

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

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection



Section 8. Exposure controls/personal protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and 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 the safe working limits of the selected respirator. Wear an appropriate NIOSH approved respirator if concentration levels exceed the safe exposure limits.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid.

Color : White to dark gray. Odor : Earthy. [Slight] : Not available. **Odor threshold** pH : 12.45 at 25°C

Melting point : 2570 to 2625°C (4658 to 4757°F)

Boiling point : 2850°C (5162°F) : Not applicable. Flash point **Evaporation rate** : Not applicable. Flammability (solid, gas) : Not applicable. Lower and upper explosive : Not applicable.

(flammable) limits

Vapor pressure Not available. Vapor density : Not available. Relative density : 2.4 to 3.4

Solubility in water : 0.125g/100g at 20°C

Partition coefficient: n-

octanol/water

: Not available.

Auto-ignition temperature : Not applicable. : Not available. **Decomposition temperature** : Not available. **Viscosity** Flow time (ISO 2431) : Not available.





Section 10. Stability and reactivity

Reactivity

Reacts violently with strong acids. Reacts with water to form Calcium Hydroxide. The heat generated when mixed with water or moist air is sufficient to ignite surrounding materials such as paper, wood or cloth.

Chemical stability

: Absorbs moisture and Carbon Dioxide in the air to form Calcium Hydroxide and Calcium Carbonate.

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: Boron tri-fluoride, chlorine tri-fluoride, ethanol, fluorine, hydrogen fluoride, phosphorus pentoxide; water and acids (violent reaction with generating heat and possible explosion in confined area).

Hazardous decomposition products

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Calcium Hydroxide	LD50 Oral	Rat	7340 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Calcium Hydroxide	Eyes - Severe irritant	Rabbit	-	10 mg	-

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP
Crystalline silica, respirable powder	-	1	Known to be a human carcinogen.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)





Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Calcium oxide	Category 3		Respiratory tract irritation
Calcium Hydroxide	Category 3		Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Crystalline silica, respirable powder	Category 1	inhalation	respiratory tract

Aspiration hazard

There is no data available.

Information on the likely

routes of exposure

: Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Causes serious eye damage. **Inhalation** : May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion: Adverse symptoms may include the following:

stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate : No known significant effects or critical hazards.

effects

Potential delayed effects: No known significant effects or critical hazards.

Long term exposure

Potential immediate : No known significant effects or critical hazards.

effects

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects





Section 11. Toxicological information

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity: May cause cancer if inhaled. Risk of cancer depends on duration and level of exposure.

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

Product/ingredient name	(3	Dermal (mg/kg)	Inhalation (gases) (ppm)	(vapors)	Inhalation (dusts and mists) (mg/ I)
Calcium Hydroxide	7340	N/A	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Calcium oxide		Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	46 days
Calcium Hydroxide	Acute LC50 33884.4 μg/L Fresh water	Fish - Clarias gariepinus - Fingerling	96 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Calcium oxide	-	2.34	low

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

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



Section 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. Waste should not be disposed of untreated 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 way. 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 waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	UN1910
UN proper shipping name	-	-	CALCIUM OXIDE
Transport hazard class(es)	-	-	8
Packing group	-	-	III
Environmental hazards	No.	No.	No.

AERG : 157

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: Not available. to IMO instruments

Section 15. Regulatory information

U.S. Federal regulations

: TSCA 8(a) CDR Exempt/Partial exemption: Not determined

RCRA classification: Not listed or classified.

CWA-311: Calcium Oxide has been withdrawn from the Clean Water Act (CWA) list of hazardous substances. (11/13/79) (44FR65400). Calcium Hydroxide has been withdrawn from the Clean Water Act (CWA) list of hazardous subtances. (11/13/79) (44FR65400), Limestone, Calcium Carbonate and Magnesium Oxide don't appear on the Clean Water Act (CWA) list of hazardous substances.

CERCLA: Not listed. FDA: Not applicable

Clean Air Act Section 112

: Not listed

(b) Hazardous Air **Pollutants (HAPs)**





Section 15. Regulatory information

Clean Air Act Section 602

Class I Substances

: Not listed

Clean Air Act Section 602

: Not listed

Class II Substances

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals

: Not listed

(Essential Chemicals)

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

CARCINOGENICITY - Category 1A

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

irritation) - Category 3

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

Composition/information on ingredients

Name	%	Classification
Calcium oxide	0 - 55	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Calcium Hydroxide	1 - 5	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
Crystalline silica, respirable powder	0.0001 - 1	(Respiratory tract irritation) - Category 3 CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

State regulations

Massachusetts : The following components are listed: Limestone; Calcium oxide; Magnesium oxide;

Calcium Hydroxide; Crystalline silica, respirable powder

: None of the components are listed. **New York**

The following components are listed: Limestone; Calcium oxide; Magnesium oxide; **New Jersey**

Calcium Hydroxide; Crystalline silica, respirable powder

Pennsylvania The following components are listed: Limestone; Calcium oxide; Magnesium oxide;

Calcium Hydroxide; Crystalline silica, respirable powder

California Prop. 65

⚠ WARNING: This product can expose you to Crystalline silica, respirable powder, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.



Section 15. Regulatory information

Ingredient name	No significant risk level	Maximum acceptable dosage level
Crystalline silica, respirable powder	-	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Viet Nam

Australia : All components are listed or exempted. Canada : All components are listed or exempted. China : All components are listed or exempted. : All components are listed or exempted. **Europe** : Japan inventory (ENCS): Not determined. **Japan** Japan inventory (ISHL): Not determined. **New Zealand** : All components are listed or exempted. **Philippines** : All components are listed or exempted. Republic of Korea : All components are listed or exempted. **Taiwan** : All components are listed or exempted. **Thailand** : Not determined. **Turkey** : All components are listed or exempted. **United States (TSCA 8b)** : All components are active or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

: All components are listed or exempted.





Section 16. Other information

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

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



Procedure used to derive the classification

Classification	Justification
SKIN CORROSION/IRRITATION - Category 2	Expert judgment
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	On basis of test data
CARCINOGENICITY - Category 1A	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract	Calculation method
irritation) - Category 3	
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method

History

Date of issue/Date of

revision

: 07/15/2020

Date of previous issue : 02/15/2019

Version : 5

Prepared by : KMK Regulatory Services Inc.

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available SGG = Segregation Group UN = United Nations

References : Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

