Safety Data Sheet Portland Limestone Cement

Section 1: Identification

GHS Product Identifier: Portland Limestone 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: Monarch PLC, cement, hydraulic cement, portland limestone cement silicate, Type IL

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

Supplier's Details:
The Monarch Cement Company
449 1200 Rd
Humboldt, KS 66748
(620) 473-2222

Emergency Telephone Number (with hours of operation):
(620) 473-2222
24 Hours / Day

Section 2: Hazards Identification

DANGER! Overexposure to portland limestone 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 limestone cement. Portland limestone 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)

Classification of the Substance or Mixture:
SKIN CORROSION / IRRITATION – Category 1
SERIOUS EYE DAMAGE / EYE IRRITATION – Category 1
SKIN SENSITIZATION – Category 1
CARCINOGENICITY / INHALATION – Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
Respiratory Tract Irritation – Category 3

GHS Label Elements

Hazard Pictograms:

Signal Words: 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: Wear protective gloves. Wear eye or face protection. Use in a well-ventilated area. Avoid breathing dust. Wash hands thoroughly after handling. May present risk of engulfment.

IF INHALED: Remove 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.

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. Persons already sensitized may react to the first 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 amounts of dry powder or splashes of wet portland limestone cement may cause effects ranging from moderate eye irritation to chemical burns or blindness.

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 limestone cement. Immediately call a POISON CENTER and seek medical attention.

Section 3: Composition / Information on Ingredients

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: Monarch PLC, cement, hydraulic cement, portland limestone cement silicate, Type IL

CAS Number / Other Identifiers:

CAS Number: 65997-15-1

Product Code: Not available

Ingredient Name:	%	CAS Number
Cement, portland, chemicals	100%	65997-15-1
The structure of Portland limestone cement may contain the following in some concentration range:		
Calcium Oxide	A – B	1305-78-8
Quartz	C – D	14808-60-7
Portland limestone cement also contains gypsum, limestone, and magnesium oxide in various concentrations. However, because these components are not classifiable as a hazard under 29 CFR 1910.1200, they are not required to be listed in this section.		
Gypsum	G – H	13397-24-5
Limestone	I – J	1317-65-3
Magnesium Oxide	K – L	1309-48-4

Any concentration shown as a range is to protect confidentiality or is due to process 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: Seek medical help if coughing or other symptoms persist. Inhalation of large amounts of portland limestone 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 limestone 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 limestone cement. Immediately wash thoroughly with lukewarm, gently flowing water and no-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 limestone 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 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 moving it, or wear gloves.

See toxicological information in in Section 11

Section 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 facepiece 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. 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 soils, 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, and 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.

Section 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 limestone 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 limestone 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 limestone cement unless appropriate procedures and protection are available. Portland limestone cement can build up or adhere to the walls of a confined space and then release or fall suddenly (engulfment).

Section 8: Exposure Controls / Personal Protection

Control Parameters: Occupational Exposure Limits

Ingredient Name:	Exposure Limits
Cement, portland, chemicals	**ACGIH TLV (United States, 3/2012)** TWA: 1 mg/m^3 8 hours. Form: Respirable Fraction **NIOSH REL (United States, 6/2009)** TWA: 5 mg/m^3 10 hours. Form: Respirable Fraction TWA 10 mg/m^3 10 hours. Form: Total **OSHA PEL (United States, 6/2010)** TWA: 5 mg/m^3 8 hours. Form: Respirable Fraction TWA 15 mg/m^3 8 hours. Form: Total Dust
Calcium Oxide	**ACGIH TLV (United States, 3/2012)** TWA: 2 mg/m^3 8 hours. **NIOSH REL (United States, 6/2009)** TWA: 2 mg/m^3 10 hours. **OSHA PEL (United States, 6/2010)** TWA: 5 mg/m^3 8 hours.
Limestone	**NIOSH REL (United States, 6/2009)** TWA: 5 mg/m^3 10 hours. Form: Respirable Fraction TWA 10 mg/m^3 10 hours. Form: Total **OSHA PEL (United States, 6/2010)** TWA: 5 mg/m^3 8 hours. Form: Respirable Fraction TWA 15 mg/m^3 8 hours. Form: Total Dust
Magnesium Oxide	**ACGIH TLV (United States, 3/2012)** TWA: 10 mg/m^3 8 hours. Form: Inhalable Fraction **OSHA PEL (United States, 6/2010)** TWA: 15 mg/m^3 8 hours. Form: Total Particulates

Quartz (Crystalline Silica)	**ACGIH TLV (United States, 3/2012)** TWA: 0.025 mg/m^3 8 hours. Form: Respirable Fraction **NIOSH REL (United States, 6/2009)** TWA: 0.05 mg/m^3 10 hours. Form: Respirable Dust **OSHA PEL (United States, 9/2017)** TWA: 0.3 mg/m^3. Form: Total Dust (1,2) TWA: 0.05 mg/m^3. Form: Respirable (1,2,3)
Calcium Sulfate (gypsum)	**ACGIH TLV (United States, 3/2012)** TWA: 10 mg/m^3 8 hours. Form: Respirable Fraction **NIOSH REL (United States, 6/2009)** TWA: 5 mg/m^3 10 hours. Form: Respirable Fraction TWA 10 mg/m^3 10 hours. Form: Total Dust **OSHA PEL (United States, 2/2006)** TWA: 5 mg/m^3 8 hours. Form: Respirable Fraction TWA 15 mg/m^3 8 hours. Form: Total Dust

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 limestone cement with a pH neutral soap and clean, uncontaminated water. If clothing becomes saturated with portland limestone 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 limestone cement inside gloves.

Body Protection: Use impervious, waterproof, abrasion, and alkali-resistant boots and protective long-sleeved and long-legged clothing to protect the skin from contact with wet portland limestone cement. To reduce foot and ankle exposure, wear impervious boots that are high enough to prevent portland limestone cement from getting inside them. Do not get portland limestone 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.

Section 9: Physical and Chemical Properties

Appearance

Physical State:	Solid. [Powder]	**Lower and Upper Explosive (Flammable) Limits:**	Not Applicable
Color:	Gray	**Vapor Pressure:**	Not Applicable
Odor:	Odorless	**Vapor Density:**	Not Applicable
Odor Threshold:	Not Available	**Relative Density:**	2.3 to 3.1
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. Non Combustible	**Auto-ignition Temperature:**	Not Applicable
Burning Time:	Not Available	**Decomposition Temperature:**	Not Available
Evaporation Rate:	Not Applicable	**SADT:**	Not Available
		Flammability (solid, gas)	Not Applicable

Section 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: This 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 limestone 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, 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, hazard decomposition products should not be produced.

Section 11: Toxicological Information

Information on Toxicological Effects

Acute Toxicity: Portland limestone 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.

Mutagenicity: There are not data available.

Carcinogenicity: See classification below.

Product / Ingredient Name	OSHA	IARC	ACGIH	NTP
Cement, portland, chemicals	-	-	A4	-
Quartz (Crystalline Silica)	-	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 (Crystalline Silica)	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 **Eye Contact:** Adverse symptoms may include the following: pain, watering, redness.
Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing

Toxicological Characteristics:

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 and also Chronic Effects from Short and Long 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.
Carcinogenicity: Portland limestone 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 studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity. Excessive exposure to crystalline silica can causes 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 Measure of Toxicity: Acute toxicity estimates: There are no data available.

Section 12: Ecological Information

Toxicity

Product / Ingredient Name	Result	Species	Exposure
Calcium Oxide	Chronic NOEC 100 mg/L Fresh Water	Fish – Oreochromis niloticus – Juvenile (Fledgling, Hatchling, Weanling)	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.

Section 13: Disposal Considerations

Disposal Methods: The generation of waste should be avoided or minimized whenever 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. Disposal 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.

Section 14: Transportation 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 emergency or spillage.

Section 15: Regulatory Information

U.S. Federal Regulations

Cement, Portland, Chemicals (65997-15-1)	Listed on U.S. TSCA (Toxic Substances Control Act) Inventory
Calcium Oxide (1305-78-8)	Listed on U.S. TSCA (Toxic Substances Control Act) Inventory
Quartz (14808-60-7)	Listed on U.S. TSCA (Toxic Substances Control Act) Inventory
Limestone (1317-65-3)	Listed on U.S. TSCA (Toxic Substances Control Act) Inventory
Magnesium Oxide (1309-48-4)	Listed on U.S. TSCA (Toxic Substances Control Act) Inventory

Section 16: Other Information

History

Date of Issue: mm/dd/yyyy 01/15/2022

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 limestone cement as it is commonly used, the sheet cannot anticipate and provide all 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 limestone cement to produce portland limestone cement products. Users should review other relevant safety data sheets before working with portland limestone cement or working on portland limestone cement products, for example, portland limestone cement concrete.

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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 Effective 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 Averages
UN – United Nations