PUR-Guard™ Filler Part C HD-TC

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier	Portland Cement
Chemical Name	Calcium compounds, calcium silicate compounds, and other calcium compounds containing iron and aluminum make up the majority of this product.
Product Name **/** Trade Name	PUR-Guard™ Filler Part C; HD-TC
CAS No.	65997-15-1

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

Identified Use(s)	Industrial Flooring Filler
Uses Advised Against	None

Details of the supplier of the safety data sheet

Company Identification	Res-Tek, Inc. 110 Riverside Drive Cartersville, Georgia 30120 United States of America
Telephone	1-888-737-8351 / 1-770-427-4034
Emergency telephone number	CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200) — Skin Corr. 1; Eye Dam. 1; Skin Sens. 1; Carc (Inhal.) 1A; STOT SE (Resp) 3

Label elements

Hazard Symbol

Signal Word(s) — **DANGER**

Hazard Statement(s)

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

Precautionary Statement(s)

Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Contaminated clothing must not be allowed out of the workplace.

Other hazards

Respirable Crystalline Silica (RCS) may cause cancer. Repeated inhalation of respirable crystalline silica (quartz) may cause lung cancer according to IARC and NTP; ACGIH states that it is a suspected cause of cancer. Other forms of RCS (e.g., tridymite and cristobalite) may also be present or formed under certain industrial processes.

Additional Information

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

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Composition/information on ingredients	%W/W	CAS No.
Portland Cement	100	65997-15-1
The structure of Portland cement may contain the following in some concentration ranges:		
Calcium oxide		1305-78-8
Quartz		14808-60-7
Hexavalent chromium*		18450-29-9
Portland cement also contains gypsum, limestone and magnesium oxide in various concentrations. However, because these components are not classifiable as a hazard under Title 29 Code of Federal Regulations 1910.1200, they are not required to be listed in this section.		
Gypsum		13397-24-5
Limestone		1317-65-3
Magnesium oxide		1309-48-4

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

Additional Information: None.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation

Seek medical help if coughing or other symptoms persist. Inhalation of large amounts of portland cement requires immediate medical attention. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If the individual is not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to- mouth resuscitation. If unconscious, place in a recovery position and get medical attention immediately. Maintain an open airway.

Skin Contact	Get medical attention immediately. Heavy exposure to portland cement dust, wet concrete or associated water requires prompt attention. Quickly remove contaminated clothing, shoes, and leather goods such as watchbands and belts. Quickly and gently blot or brush away excess portland cement. Immediately wash thoroughly with lukewarm, gently flowing water and non-abrasive pH natural soap. Seek medical attention for rashes, burns, irritation, dermatitis and prolonged unprotected exposure to wet cement, cement mixtures or liquids from wet cement. Burns should be treated as caustic burns. Portland cement causes skin burns with little warning. Discomfort or pain cannot be relied upon to alert a person to a serious injury. You may not feel pain or the severity of the burn until hours after the exposure Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure.
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.
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 - acuate and delayed	Causes serious eye damage. May cause respiratory irritation. Causes severe burns. May cause an allergic skin reaction. May cause burns to mouth, throat and stomach.

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.
Special hazards arising from the substance or mixture	No specific fire or explosion hazard.
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.
Further information	None.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Wear suitable protective clothing, gloves and eye/face protection. Wear appropriate respirator when ventilation is inadequate. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe dust. Provide adequate ventilation.

Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Methods and material for containment and cleaning up	Approach suspected leak areas with caution. Place in appropriate chemical waste container.
Small spills	Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter. Place spilled material in a designated, labeled waste container. Dispose of waste material by using a licensed waste disposal contractor.
Large spills	Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place dust in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Large spills to waterways may be hazardous due to alkalinity of the product. Dispose of waste material using a licensed waste disposal contractor.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Handling	Put on appropriate personal protective equipment. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not handle until all safety precautions have been read and understood. Do not get in eyes, 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. Eating, drinking and smoking should be prohibited in areas where this material ishandled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.
Storage	A key to using the product safely requires the user to recognize that portland cement reacts chemically with water to produce calcium hydroxide which can cause severe chemical burns. Every attempt should be made to avoid skin and eye contact with cement. Do not get portland cement inside boots, shoes or gloves. Do not allow wet, saturated clothing to remain against the skin. Promptly remove clothing and shoes that are dusty or wet with cement mixtures. Launder/clean clothing and shoes before reuse. Do not enter a confined space that stores or contains portland cement unless appropriate procedures and protection are available. Portland cement can build up or adhere to the walls of a confined space and then release or fall suddenly (engulfment).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational Exposure Limits

Component	ACGIH TLV (TWA)	NIOSH REL (TWA)	OSHA PEL (TWA)
Cement, portland, chemicals	1 mg/m³ 8hours. Form: Respirable fraction	5 mg/m³ 10 hours. Form: Respirable fraction	5mg/m³. 8 hours. Form: Respirable fraction
		10 mg/m³ 10 hours. Form: Total	15 mg/m³. 8 hours. Form: Total
Calcium oxide	2 mg/m³ 8 hours	2mg/m³ 10 hours	5 mg/m³ 8 hours
Limestone		5 mg/m³ 10 hours. Form: Respirable fraction	5 mg/m³ 8 hours. Form: Respirable fraction
		10 mg/m³ 10 hours. Form: Total	15 mg/m³ 8 hours. Form: Total
Magnesium oxide	10 mg/m³ 8 hours. Form: Inhalable fraction		15 mg/m³ 8 hours. Form: Total
Quartz	0.025 mg/m³ 8 hours. Form: Respirable fraction	0.05 mg/m³ 10 hours. Form: Respirable dust	10 mg/m³ divided by % SiO2 + 2: Respirable
			30 mg/m³ divided by % SiO2 + 2: Total
Calcium sulfate (gypsum)	10 mg/m³ 8 hours. Form: Respirable fraction	5 mg/m³ 8 hours. Form: Respirable fraction	5 mg/m³ 8 hours. Form: Respirable fraction
		10 mg/m³ 8 hours. Form: Total	15 mg/m³ 8 hours. Form: Total

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.

Personal protection equipment

Hygiene measures

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

Eye/face protection

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

Skin protection (Hand protection/ Other)

Use impervious, waterproof, abrasion and alkali-resistant gloves. Do not rely on barrier creams in place of impervious gloves. Do not get portland cement inside gloves. 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 cement. To reduce foot and ankle exposure, wear impervious boots that are high enough to prevent

portland cement from getting inside them. Do not get portland cement inside boots, shoes, or gloves. Remove clothing and protective equipment that becomes saturated with cement and immediately wash exposed areas of the body. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.

Respiratory protection

Use 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

Information on basic physical and chemical properties

Appearance	Solid [Powder]
Color.	Gray or White
Odor	Odorless
Odor Threshold (ppm)	Not available.
pH (Value)	>11.5 [Conc. (% w/w): 1%]
Melting Point (°C) / Freezing Point (°C)	Not available.
Boiling point/boiling range (°C):	>1000°C (>1832°F)
Flash Point (°C)	Not flammable. Not combustible
Evaporation Rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Explosive Limit Ranges	Not applicable.
Vapor pressure (mmHg)	Not applicable.
Vapor Density (Air=1)	Not applicable.
Density (g/ml)	2.3 to 3.1
Solubility (Water)	0.1 to 1%
Solubility (Other)	Not available.
Partition Coefficient (n-Octanol/water)	Not applicable.
Auto Ignition Point (°C)	Not applicable.
Decomposition Temperature (°C)	Not available.
Viscosity	Not applicable.
Other information	No additional information.

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	The product is stable.
Possibility of hazardous reactions	Under normal circumstances of storage and use, hazardous reactions will not occur.
Conditions to avoid	No specific data.
Incompatible materials	Reactive or incompatible with the following materials: oxidizing materials, acids, aluminum and ammonium salt. Portland cement is highly alkaline and will react with acids to produce a violent, heat- generating reaction. Toxic gases or vapors may be given off depending on the acid involved. Reacts with acids, aluminum metals and ammonium salts. Aluminum powder and other alkali and alkaline earth elements will react in wet mortar or concrete, liberating hydrogen gas. Limestone ignites on contact with fluorine and is incompatible with acids, alum, ammonium salts, and magnesium. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride yielding possible fire and/or explosions. Silicates dissolve readily in hydrofluoric acid producing a corrosive gas-silicon tetrafluoride.
Hazardous decomposition product(s)	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Other hazards	No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Likely routes of exposure

Effects on eye	Causes serious eye damage. May cause burns in the presence of moisture.
Effects on Skin	May cause skin irritation. May cause serious burns in the presence of moisture.
Inhalation Effects	May cause respiratory tract irritation.
Ingestion Effects	No data available.
Sensitization	May cause sensitization due to the potential presence of trace amounts of hexavalent chromium.

Acute toxicity

Acute Oral Toxicity	LD50 / LC50 Not available (Portland Cement)

Mutagenicity: No data available.

Carcinogenicity:

Component	OSHA	IARC	ACGIH	NTP
Cement, portland, chemicals			A4	
Quartz		1	A2	Known to be a human carcinogen.

Reproductive toxicity	No data available.
Teratogenicity:	No data available.
Specific target organ toxicity (single exposure)	Severe eye irritation. Risk of serious damage to eyes.

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

Specific target organ toxicity (repeated exposure) No data available.

Chronic toxicity or effects from long term exposures

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

Aspiration hazard No data available.

Information on the likely routes of exposure

Potential acute health effects

Eye contact	Causes serious eye damage.
Inhalation:	May cause respiratory irritation.
Skin contact:	Causes severe burns. May cause an allergic skin reaction.
Ingestion:	May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:	Adverse symptoms may include the following: pain, watering, 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, 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. If sensitized to hexavalent chromium, a severe allergic dermal reaction may occur when subsequently exposed to very low levels.
Carcinogenicity:	Portland cement is not classifiable as a human carcinogen. Crystalline silica is considered a hazard by inhalation. IARC has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity. Excessive exposure to crystalline silica can cause silicosis, a non-cancerous lung disease.

Mutagenicity:	No known significant effects or critical hazards.
Teratogenicity:	No known significant effects or critical hazards.
Developmental effects:	No known significant effects or critical hazards.
Fertility effects:	No known significant effects or critical hazards.
Numerical measures of toxicity:	Acute toxicity estimates: There are no data available.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Component	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 not data available.
Bioaccumulative potential	There are not 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

Waste treatment methods

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

Additional Information

None known.

SECTION 14: TRANSPORT INFORMATION

	Land transport (U.S. DOT)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	Not regulated.	Not regulated.	Not regulated.
Proper Shipping Name			
Transport hazard class(es)			
Packing group			
Environmental hazards	No	No	No
Special precautions for user	None assigned	None assigned	None assigned

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not available.

SECTION 15: REGULATORY INFORMATION

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

US Federal regulations

TSCA 6 final risk management:	Chromium, ion (Cr6+)
United States inventory (TSCA 8b):	Cements are considered to be statutory mixtures under TSCA. CAS 65997-15-1 is included on the TSCA inventory.
CERCLA:	This product is not listed as a CERCLA substance
Clean Air Act Section 112 (b): Hazardous Air Pollutants (HAPs):	Not listed
Clean Air Act Section 602: Class I Substances	Not listed.
Clean Air Act Section 602: Class II Substances	Not listed.
DEA List I Chemicals: (Precursor Chemicals)	Not listed.
DEA List II Chemicals: (Essential Chemicals)	Not listed.
SARA 302/304/311/312 hazardous chemicals	Immediate (acute) health hazard Delayed (chronic) health hazard

Component	%	Fire Hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Calcium oxide		No	No	No	Yes	No
Quartz	>0.1	No	No	No	No	Yes
Chromium, ion (Cr6+)	<0.1	No	No	No	Yes	Yes

SARA 313 Component(s) above the minimum level None.

Component	Component	CAS Number	%
Form R-Report requirements	Chromium, ion (Cr6+)	8540-29-9	<0.1

State Regulations

Massachusetts:	The following components are listed: cement, portland, chemicals, limestone.
New York:	None of the components are listed.
New Jersey:	The following components are listed: cement, portland, chemicals, gypsum, limestone.
Pennsylvania:	The following components are listed: cement, portland, chemicals, gypsum, limestone.

California Proposition 65

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

Component	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Quartz	**Yes**	**No**	**No**	**No**
Chromium, ion (Cr6+)	**Yes**	**Yes**	**0.001µg/day (inhalation)**	**8.2 micrograms/day (ingestion)**

International regulations

Country	Inventory List	Status
Australia inventory	AICS	All components are listed.
Canada inventory	DSL	Portland cement is included on the DSL.
Mexico	INSQ	All components are listed or exempted.
EU	EINECS, ELINCS or NLP	All components are listed or exempted..
United States inventory	TSCA	All components are listed or exempted.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1 - 16.

Hazard Statement(s) Listed in: SECTION 3

H314: Causes severe skin burns and eye damage
H317: May cause an allergic skin reaction
H335: May cause respiratory irritation
H350: May cause cancer

Additional Information:

Hazard Rating System HMIS

Health: 3
Flammability: 0
Physical Hazard: 0

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