Safety Data Sheet

Pyrotek Ceramic Blanket 2300, 2600
Pyrotek Bulk Ceramic Fiber 2300, 2600

Revision Date: 2017-03-08
Revision Number: 5

Classification	PPE	Transport Symbols
		

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier

Product Name **Pyrotek Ceramic Blanket 2300, 2600**
Pyrotek Bulk Ceramic Fiber 2300, 2600

Other means of identification

Commodity code 04002 - MW
Synonym No Synonym

Recommended use of the chemical and restrictions on use

Product use Strong but lightweight needled vitreous fiber RCF fiber material.
Uses advised against Not fit for use in anything related to human consumption.

Details of the supplier

Corporate office:
Pyrotek Inc.
705 West 1st Ave
Spokane, WA 99201-3909
United States

Phone 1: (509) 926-6212
Phone 2: 1-800-PYROTEK
Fax: (509) 927-2408
Email: SDS@pyrotek-inc.com

Emergency Telephone Number CHEMTREC North America (800) 424-9300, CHEMTREC Outside North America +1 703 527 3887 Pyrotek Grevenbroich +49 2182 81020 only during the business hours: Mo-Th 08:00-17:00, Fr 08:00-13:00 CET

2. Hazards Identification

Classification

Carcinogenicity	Category 1B

Label Elements

Danger

Hazard statements
May cause cancer

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
None known
Other information

3. Composition/information on Ingredients

Chemical name	CAS No	Weight-%	GHS Classification
Refractory Ceramic Fibre (RCF)	142844-00-6	100 %	Carc. 1B (H350i)

Further information
Synthetic vitreous fibers (SVF) are fibrous inorganic substances classified into three general groups: fibrous glass (glasswool and glass filament), mineral wool (rockwool and slagwool), and refractory ceramic fibers (RCF). Devitrification (conversion of fibers to a crystalline state) may occur when SVF materials are exposed to high temperatures producing disordered crystalline silica forms.

The exact percentage (concentration) of composition is not shown due to component range variations, withheld or trade secret ingredients.

4. First Aid Measures

General advice	If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
Skin Contact	Wash off immediately with plenty of water. Do not rub. If skin irritation persists, call a physician.
Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Do not rub. If symptoms persist, call a physician.
Inhalation	Remove to fresh air. Get person to drink water to clear throat and blow nose to evacuate dust and fibers. If symptoms persist, call a physician.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Notes to Physician	Treat symptomatically.
Protection of first-aiders	Use personal protective equipment.

5. Fire-Fighting Measures

Flammable properties
The product is not flammable.

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding fire.

Unsuitable Extinguishing Media
None known.

Specific hazards arising from the chemical
None known.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Appropriate protective equipment as detailed in section 8. Avoid dust formation. Evacuate personnel to safe areas.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Flush into sewer with plenty of water.

Methods and material for containment and cleaning up

Avoid dust formation. Vacuum or wet sweep. Use a vacuum cleaner fitted with high efficiency filter (HEPA). Take up mechanically, placing in appropriate containers for disposal. Keep in properly labelled containers.

Other information Do not create a powder cloud by using a brush or compressed air.

7. Handling and Storage

Precautions for safe handling

Avoid dust formation. Do not breathe dust. Avoid contact with skin and eyes. Use only in area provided with appropriate exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labelled containers.

Materials to avoid
Hydrofluoric acid. Phosphoric acid. Alkaline solutions.

8. Exposure controls/Personal Protection

Control parameters

Chemical name	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Refractory Ceramic Fibre (RCF)	TWA: 0.2 fibre/cm3	TWA: 0.2 fibre/cm3	TWA: 0.5 fibre/cm3	TWA: 1 fibre/cm3

Chemical name	Argentina	Brazil	Chile	Venezuela
Refractory Ceramic Fibre (RCF) 142844-00-6	TWA: 0.2 fiber/cm3	Not Listed	Not Listed	Not Listed

Appropriate engineering controls

Engineering Controls Mechanical ventilation and local exhaust is recommended.

Individual protection measures, such as personal protective equipment

Eye Protection Tightly fitting safety goggles.
Hand Protection Protective gloves.
Skin Protection Wear gloves and work clothes, which are loose fitting at neck and wrists.
Respiratory protection At concentrations of dust below the limit value, a respirator with dustfilter P2/FFP2 is recommended. At concentrations of dust over the limit value, use a respirator with dustfilter P3/FFP3 and at concentrations 10 times the limit value, use a TMP2P / TH3P.

General industrial hygiene practice
Wash at the end of each work shift and before eating, smoking or using the toilet. Work clothes should be cleaned to remove

excess fibers before being taken off (e.g. use vacuum cleaner, not compressed air). Work clothes should be washed separately. Eyewash station recommended. Regular cleaning of equipment, work area and clothing. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State	Solid		
Appearance	Blanket, Paper, Board, Bulk	**Odor**	Odorless
Color	White	**Odor threshold**	Not applicable

Property	**Values**	**Remarks • Methods**
pH	Not applicable	
Melting / freezing point	>1760 °C / 3200 °F	
Boiling point / boiling range	Not determined	
Flash Point	Nonflammable	
Evaporation rate		
Flammability Limit in Air		
Upper Flammability Limit	Not applicable	
Lower Flammability Limit	Not applicable	
Vapor pressure	Not determined	
Vapor density		
Specific gravity	2,5 - 2,75	
Water solubility	Insoluble in water	
Solubility in other solvents	Not determined	
Partition coefficient: n-octanol/water	Not available	
Autoignition Temperature	Not determined	
Decomposition temperature	No data available	
Viscosity, kinematic		
Explosive properties	Non explosive	

Other information

VOC content	Not determined

10. Stability and Reactivity

Reactivity

Chemical stability
Stable.

Possibility of Hazardous Reactions
Hazardous polymerization does not occur.

Conditions to Avoid
None known.

Incompatible materials
Hydrofluoric acid. Phosphoric acid. Alkaline solutions.

Hazardous Decomposition Products
Respirable fibers, formed by high temperature cycles may be released during after-service removal. See sections 3 and 16.

11. Toxicological Information

Information on likely routes of exposure

Eye Contact	Contact with eyes may cause irritation.
Skin Contact	May cause eye/skin irritation.
Ingestion	Ingestion may cause irritation to mucous membranes.
Inhalation	May cause irritation of respiratory tract.

Information on toxicological effects

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Mutagenic effects	None known.
Target organ effects	Respiratory System. Eyes. Skin.
Specific target organ systemic toxicity (single exposure)	None known.
Specific target organ systemic toxicity (repeated exposure)	None known.
Chronic Toxicity	There is no evidence that people working inside the RCF-industry had obtained interstitial fibrosis. Prolonged exposure of cristobalite dust may give lung diseases

RCF HEALTH DATA SUMMARY: Epidemiological studies of RCF production workers have indicated no increased incidence of respiratory disease norother significant health effects. In animal studies, long-term, high-dose inhalation exposure resulted in thedevelopment of respiratory disease in rats and hamsters.

RCF EPIDEMIOLOGY:In order to determine possible human health effects following RCF exposure,the University of Cincinnati in the United Statesand the Institute of Occupational Medicine (IOM) in Europe have conducted medical surveillance studies on RCF workers inU.S. and European manufacturing facilities. The University of Cincinnati study has been in progress for over 20-years,collecting data from respiratory questionnaires, lung function tests, chest X-rays, exposure monitoring, and worker mortality.The results of this study of RCF plant workers exposed from 1953 to the present have shown (LeMasters et al, 2003):The initial cross-sectional spirometry studies in the U.S. (LeMasters et al.1998) and Europe (Cowie et al.2001) revealed lungfunction decrements in the RCF-exposed cohort that were associated with heavier historical exposures. Subsequently,longitudinal studies have revealed no RCF exposure related decrements in lung function associated with current exposurelevels.Through 1996, pleural plaques seen on chest X-rays in 2.7% of the workers. Pleural plaques are considered a marker ofexposure and not disease. The prevalence of pleural plaques has remained relatively constant over time, perhaps as a resultof lower current exposure levels.Thus, this long term epidemiology study has demonstrated an absence of interstitial fibrosis, no increased mortality risk andno decrement in lung function associated with current exposures.

RCF TOXICOLOGY:Early animal studies of RCF effects by intraperitoneal and intrapleural injections, as well as by inhalation, resulted in mostlynegative results. In an effort to eliminate any questions posed by the results of these early studies, a definitive MaximumTolerated Dose Study (MTD) by nose only, lifetime inhalation in rats and hamsters, was designed in the 1980s. The MTDstudy appeared to confirm that RCF was an animal carcinogen under certain test conditions, e.g., extremely highconcentrations of approximately 200 f/cc inhaled directly into the lungs.A later review of the MTD pathology indicated that the animals, lungs were likely overloaded because of large quantities of non-fibrous particles, and that this overload condition was likely responsible for the disease observed. In fact, evaluation of theaerosol samples used confirmed the presence of significant quantities of particulate matter.In a subsequent multi-dose animal inhalation study at 25 f/cc, 75 f/cc, and 115 f/cc; a no observed effect level (NOEL) wasfound at 25 f/cc. This level is 50 times the RCFC recommended REG of 0.5 f/cc for humans.

Numerical measures of toxicity

Product Information

Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Refractory Ceramic Fibre (RCF)	-	-	-

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen:

Chemical name	IARC	NTP	OSHA	Mexico
Refractory Ceramic Fibre (RCF)	Group 2B	Reasonably Anticipated	Present	Not Listed

Chemical name	Argentina	Chile	Venezuela
Refractory Ceramic Fibre (RCF)	A2	Not Listed	Present

IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

12. Ecological Information

Ecotoxicity

100 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Freshwater Algae Data	Freshwater Fish Species Data	Microtox Data	Water Flea Data
Refractory Ceramic Fibre (RCF) 142844-00-6 (100 %)	No data available			No data available

Persistence and degradability
None known.

Bioaccumulation
No information available.

Mobility in Environmental Media
No information available.

Ozone depletion potential (ODP)
Not applicable.

13. Disposal Considerations

Waste disposal methods
Dispose of in accordance with federal, state and local regulations.

Contaminated packaging
Empty containers should be taken for local recycling, recovery or waste disposal.

Other information
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Dispose of packings and packing waste in accordance with guideline 94/62/EC of the council and the European Parliament of December 20, 1994 as well as the packaging regulation 2004/12/EG of February 11, 2004 and Directive 2005/20/EC from March 9, 2005.

14. Transport Information

DOT Not regulated

15. Regulatory Information

International Inventories

Chemical name	TSCA	EINECS	ELINCS	DSL	NDSL	PICCS	ENCS	China	AICS	KECL
Refractory Ceramic Fibre (RCF)	-	-	-	-	-	-	-	X	-	-

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

16. Other Information

After Service Removal

High concentrations of fibers and other dusts may be generated when after-service products are mechanically disturbed during operations such as wrecking and removal. Take measures to reduce dust emissions, and wear appropriate respirator to minimize dust exposure and comply with local regulatory limits.

Revision Date: 2017-03-08

Reason for Revision: SDS authored to support new product.

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End of SDS