



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

Revision Date: 2023-04-21

Revision Number: 8

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.com

Emergency Telephone Number

Call CHEMTREC: +1 703-741-5970 / 1-800-424-9300

2. Hazards Identification

Classification

Carcinogenicity	Category 1B
-----------------	-------------

Label Elements

Signal word: **Danger**

Hazardous components

Component
Refractory Ceramic Fibre (RCF) 100 %

CAS No.
142844-00-6

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-%	Classification based on individual ingredients of the mixture
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

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

Avoid release to the environment.

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	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico
Refractory Ceramic Fibre (RCF)	TWA: 0.2 fiber/cm ³ respirable fibers: length >5	0.1 f/cm ³	Not Listed	TWA: 0.2 fiber/cm ³

	µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination			
--	---	--	--	--

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: 0.2 fibre/cm3

Chemical name	Argentina	Brazil	Chile	Venezuela
Refractory Ceramic Fibre (RCF)	TWA: 0.2 fiber/cm3	TWA: 0.2 fiber/cm3	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	Odor	Odorless
Appearance	Blanket, Board, Bulk, Paper	Odor threshold	Not applicable
Color	White		

<u>Property</u>	<u>Values</u>	<u>Remarks • Methods</u>
pH	Not applicable	
Melting point / freezing point	>1760 °C / 3200 °F	
Boiling point / boiling range	Not applicable	
Flash point	Not flammable	None known
Evaporation rate		

Flammability Limit in Air

Upper flammability or explosive limits	Not applicable
Lower flammability or explosive limits	Not applicable
Vapor pressure	Not applicable

Vapor density	
Specific gravity	2,5 - 2,75
Water solubility	Insoluble in water
Solubility(ies)	Not applicable
Partition coefficient	
Autoignition temperature	Not applicable
Decomposition temperature	No data available
Kinematic viscosity	
Dynamic viscosity	
Explosive properties	Non explosive

Other Information

VOC Content (%)	Not applicable
------------------------	----------------

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.
STOT - single exposure	None known.
STOT - 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 nor other significant health effects. In animal studies, long-term, high-dose inhalation exposure resulted in the development 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 States and the Institute of Occupational Medicine (IOM) in Europe have conducted medical surveillance studies on RCF workers in U.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 lung function 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 exposure levels. Through 1996, pleural plaques seen on chest X-rays in 2.7% of the workers. Pleural plaques are considered a marker of exposure and not disease. The prevalence of pleural plaques has remained relatively constant over time, perhaps as a result of lower current exposure levels. Thus, this long term epidemiology study has demonstrated an absence of interstitial fibrosis, no increased mortality risk and no 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 mostly negative results. In an effort to eliminate any questions posed by the results of these early studies, a definitive Maximum Tolerated Dose Study (MTD) by nose only, lifetime inhalation in rats and hamsters, was designed in the 1980s. The MTD study appeared to confirm that RCF was an animal carcinogen under certain test conditions, e.g., extremely high concentrations 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 the aerosol 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) was found at 25 f/cc. This level is 50 times the RCF recommended REG of 0.5 f/cc for humans.

Numerical measures of toxicity
Product Information

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
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	A2 - Suspected human carcinogen (listed under Synthetic vitreous fibers)

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

Hazardous components

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Refractory Ceramic Fibre (RCF) 142844-00-6 (100 %)	No data available			No data available

Persistence and degradability

None known.

Bioaccumulation

Not applicable.

Mobility in Environmental Media

Not applicable.

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 as dangerous goods.

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*

USA

Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product may contain a chemical or chemicals, if listed below, which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372:

SARA 311/312 Hazardous Categorization

Chemical name	CERCLA/SARA 302 TPQ	OSHA PRINT THRESHOLD
Refractory Ceramic Fibre (RCF) (CAS #: 142844-00-6)		0.1

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Prop. 65	Type
Refractory Ceramic Fibre (RCF) (CAS #: 142844-00-6)	Carcinogen (airborne particles of respirable size)	-

**State Right-to-Know
CANADA**

Chemical name	WHMIS
Refractory Ceramic Fibre (RCF) (CAS #: 142844-00-6)	Non-controlled

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: 2023-04-21

Reason for Revision Routine review with applicable updates to better reflect product.

Disclaimer:

Pyrotek Incorporated, and its affiliates and subsidiaries ("Pyrotek"), believe that the information contained in this Safety Data Sheet ("SDS") is accurate as of the revision date. The American English translation precedes all other translations. **PYROTEK MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** User is responsible for determining whether the product is fit for a particular purpose and suitable for user's method of use or application. The information in this SDS relates only to the specific material designated herein, and may not be valid where such product is used in combination with any other materials or in any process. All materials may present unknown hazards. It is the user's obligation to evaluate and use this information and/or the product safely and in compliance with all applicable laws and regulations.

End of SDS

United States of America
California Proposition 65
Graphic



Signal word:
California Proposition 65

Warning
This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov