

# SAFETY DATA SHEET

SDS FC Injectite 2600 Caulking 18 08 09

## FC Injectite 2600

## Effective Date: August 9th, 2018

## 1. IDENTIFICATION

- A. Product Identifier used on label: FC Injectite 2600 Caulking
- B. Other means of identification: High Temperature Ceramic Fibre Insulating Material in tubes

#### C. Recommended use of the chemical and restrictions on use:

• Primary Use: Refractory Ceramic Fibre (RCF) materials are used primarily in industrial high temperature insulating applications. Examples include heat shields, heat containment, expansion joints, industrial furnaces, ovens, kilns, boilers and other process equipment at applications up to 1400°C. RCF based products are not intended for direct sale to the general public. While RCFs are used in the manufacture of some consumer products, such as catalytic converter mats and wood burning stoves, the materials are contained, encapsulated, or bonded within the units.

- Uses Advised Against: Dismantling product for other applications.
- D. Manufacturer Name FibreCast Incorporated, 3264 Mainway, Burlington, Ontario, Canada, L7M 1A7 Phone 905-319-1080; Fax 905-319-7611

Product Stewardship Info: 1-800-322-2293 [Mon to Fri 8 AM to 4:30 PM]

E. Emergency Phone #: CHEMTREC will provide assistance for chemical emergencies at 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

- A. Classification of the chemical is based in Canada on the 5th revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals from the United Nations Economic Commission for Europe and in the USA, it is based on the US Occupational Safety and Health Administration Hazard Communication Standards of 2012. These standards indicate that the product is considered as IARC Group 2B which corresponds to OSHA HCS 2012 Category 2 carcinogen classification.
- B. Signal word, hazard statement(s), symbol and precautionary statement(s) in accordance with paragraph (f) of §1910.1200

Under OSHA HCS 2012, RCF is classified as a category 2 carcinogen.

Hazard Pictogram

Signal Word: Warning



Hazard Statements: Suspected of causing cancer by inhalation.

**Precautionary statements:** Do not handle until all safety instructions have been read and understood. Use respiratory protection as required; see section 8 of the Safety Data Sheet. If concerned about exposure, get medical advice. Store in a manner to minimize airborne dust. Dispose of waste in accordance with local, provincial or state and federal regulations.

**Supplementary Information:** May cause temporary mechanical irritation to exposed eyes, skin or respiratory tract. Minimize exposure to airborne dust.

- C. Describe any hazards not otherwise classified that have been identified during the classification process: Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure. These effects are usually temporary.
- D. Mixture rule: Not applicable.



## 3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	% BY WEIGHT
Water	7732-18-5	30 to 60
Refractories, Fibres, AluminosilicateSynonyms: RCF; ceramic fibre; alumino-silicate wool [ASW]; synthetic vitreous fibre [SVF]; man-made vitreous fibre [MMVF]; man-made mineral fibre [MMMF]; high temperature insulation wool [HTIW]	142844-00-6	25 to 40
Colloidal silica	7631-86-9	10 to 30

#### Impurities and Stabilizing Additives: Not applicable

#### 4. FIRST AID MEASURES

## A. Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion

**SKIN** Handling of this material may generate mild mechanical temporary skin irritation. If this occurs, rinse affected areas with water and wash gently. Do not rub or scratch exposed skin.

**EYES** In case of eye contact flush abundantly with water; have eye bath available. Do not rub eyes. NOSE AND THROAT If these become irritated move to a dust free area, drink water and blow nose. If symptoms persist, seek medical advice.

**B.** Most important symptoms/effects, acute and delayed: Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure. These effects are usually temporary.

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

**NOTES TO PHYSICIANS** Skin and respiratory effects are the result of temporary, mild mechanical irritation; fibre exposure does not result in allergic manifestations.

#### 5. FIRE FIGHTING MEASURES

- A. Suitable (and unsuitable) extinguishing media: Use extinguishing agent suitable for surrounding combustible materials.
- **B.** Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products): Non-combustible products, class of reaction to fire is zero. Packaging and surrounding materials may be combustible.
- C. Special protective equipment and precautions for fire-fighters: NFPA Codes: Flammability: 0 Health: 1 Reactivity: 0 Special: 0

### 6. ACCIDENTAL RELEASE MEASURES

- A. Personal precautions, protective equipment, and emergency procedures: Product is in a wet moldable of pumpable state when shipped, hence not dusty. After use, minimize airborne dust. Compressed air or dry sweeping should not be used for cleaning. See Section 8 "Exposure Controls / Personal Protection" for exposure guidelines.
- B. Methods and materials for containment and cleaning up: Frequently clean the work area with vacuum or wet sweeping to minimize the accumulation of debris. Do not use compressed air for clean-up.

EMPTY CONTAINERS: Product packaging may contain residue. Do not reuse

#### 7. HANDLING AND STORAGE

A. Precautions for safe handling: Handle fibre carefully to minimize airborne dust. Limit use of power tools unless in conjunction with



local exhaust ventilation. Use hand tools whenever possible.

B. Conditions for safe storage, including any incompatibilities: Store in a manner to minimize chance of freezing. After use, handle carefully to minimize generation of dust.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

A. Occupational Exposure Limits for Refractory Ceramic Fibre [RCF]: Ontario OEL is 0.5 f/cc, 8-hr. TWAEV. Note the following statement. Unlike Canada, which recommends 0.2 to 1 f/cc as the TWAEV for RCF (depending on the province), there is no specific regulatory standard for refractory ceramic fibre in the U.S. It uses the OSHA "Particulate Not otherwise Regulated (PNOR)" standard (29CFR 1910.1000 Subpart Z, Air Contaminants) that considers it as part of a Total Dust TWAEV of 15 mg/m 3 with a Respirable Fraction of 5 mg/m 3.

**Exposure Guidelines – Other Ingredients:** The occupational exposure limits vary widely and are under constant review. Refer to those that apply currently to the location where the product is in use or being removed from service. The engineering controls or personal protective equipment employed to reduce exposure to ceramic fibre will also control worker exposure to the following ingredients. The manufacturer recommends the following time weighted average occupational action levels for the other ingredients and they are based on current good industrial hygiene practices:

COMPONENTS	Ontario TWAEV
Amorphous silica	10 mg/m3 (as inhalable particles) 2 mg/m3 (as respirable particles)
Silica (after use)	0.05 mg/m3 as respirable particles (from after use - tear out activities)

**B.** Appropriate engineering controls: Use engineering controls such as local exhaust ventilation, point of generation dust collection, down draft work stations, emission controlling tool designs, and materials handling equipment designed to minimize airborne fibre emissions.

#### C. Individual protection measures, such as personal protective equipment

Skin Protection: Wear personal protective equipment (e.g. gloves), as necessary to prevent skin irritation. Washable or disposable clothing may be used. If possible, do not take unwashed clothing home. If soiled work clothing must be taken home, employees should be informed on best practices to minimize non-work dust exposure (e.g., vacuum clothes before leaving the work area, wash work clothing separately, and rinse washer before washing other household clothes).

Eye Protection: As necessary, wear goggles or safety glasses with side shields.

**Respiratory Protection:** When engineering and/or administrative controls are insufficient to maintain workplace concentrations below the 0.5 f/cc REG or a regulatory OEL, the use of appropriate respiratory protection, pursuant to the requirements of OSHA Standards 29 CFR 1910.134 and 29 CFR 1926.103, is recommended. A NIOSH certified respirator with a filter efficiency of at least 95% should be used. The 95% filter efficiency recommendation is based on NIOSH respirator selection logic sequence for exposure to manmade mineral fibres. Pursuant to NIOSH recommendations, N-95 respirators are appropriate for exposures up to 10 times the NIOSH Recommended Exposure Limit (REL). With respect to RCF, both the NIOSH REL and the industry REG have been set at 0.5 fibres per cubic centimeter of air (f/cm3). Accordingly, N-95 would provide the necessary protection for exposures up to 5 f/cm3. Further, the Respirator Selection Guide published by 3M Corporation, the primary respirator manufacturer, specifically recommends use of N-95 respirators for RCF exposures. In cases where exposures are known to be above 5.0 f/cm3, 8 hour TWA, a filter efficiency of 100% should be used. Other factors to consider are the NIOSH filter series N, R or P -- (N) Not resistant to oil, (R) Resistant to oil and (P) oil Proof. These recommendations are not designed to limit informed choices, provided that respiratory protection decisions comply with 29 CFR 1910.134.

The evaluation of workplace hazards and the identification of appropriate respiratory protection is best performed, on a case by case basis, by a qualified Industrial Hygienist.

**Other Information:** Concentrations based upon an eight-hour time weighted average (TWA) as determined by air samples collected and analyzed pursuant to NIOSH method 7400 (B) for airborne fibres. The manufacturer recommends the use of a full-face piece air purifying respirator equipped with an appropriate particulate filter cartridge during furnace tear-out events and the removal of used RCF to control exposures to airborne fibre and the potential presence of crystalline silica.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Light brown, fibrous caulking product	PARTITION COEFFICIENT Not applicable
BOILING POINT Not applicable	AUTO-IGNITION TEMPRATURE Not applicable
ODOUR Slight	DECOMPOSITION TEMPERATURE Not applicable
FLASH POINT Not applicable	DENSITY 80#/cf
MELTING POINT 1760° C/ 3200° F	VAPOUR PRESSURE Not applicable
ODOUR THRESHOLD Not applicable	SOLUBILITY Insoluble
FLAMMABILITY Not applicable	pH Not applicable
EVAPORATION RATE Not applicable	UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS Not applicable

## **10. STABILITY AND REACTIVITY**

A. Reactivity	RCF is non-reactive
B. Chemical stability	As supplied RCF is stable and inert.
C. Possibility of hazardous reactions	None
D. Conditions to avoid	Please refer to handling and storage advice in Section 7
E. Incompatible materials	None
F. Hazardous decomposition products	None

## **11. TOXICOLOGICAL INFORMATION**

For more details on scientific publications referenced in this SDS see http://www.htiwcoalition.org/publications.html

#### (a) through (d)

#### A. TOXICOKINETICS, METABOLISM AND DISTRIBUTION

**Basic Toxicokinetics:** Exposure is predominantly by inhalation or ingestion. Man-made vitreous fibres of a similar size to RCF have not been shown to migrate from the lung and/or gut and do not become located in other organs of the body.

**Human Toxicological Data/Epidemiology Data:** In order to determine possible human health effects following RCF exposure, the University of Cincinnati has been conducting medical surveillance studies on RCF workers in the U.S.A; this epidemiological study has been ongoing for 25 years and medical surveillance of RCF workers continues. The Institute of Occupational Medicine (IOM) has conducted medical surveillance studies on RCF workers in European manufacturing facilities. Pulmonary morbidity studies among production workers in the U.S.A. and Europe have demonstrated an absence of interstitial fibrosis. In the European study a reduction of lung capacity among smokers has been identified, however, based on the latest results from a longitudinal study of workers in the U.S.A. with over 17-year follow-up, there has been no accelerated rate of loss of lung function (McKay et al. 2011). A statistically significant correlation between pleural plaques and cumulative RCF exposure was evidenced in the U.S.A. longitudinal study. The U.S.A. mortality study showed no excess mortality related to all deaths, all cancer, or malignancies or diseases of the respiratory system including mesothelioma (LeMasters et al. 2003).

#### **Information on Toxicological Effects**

• Acute toxicity: short term inhalation : No data available: Short term tests have been undertaken to determine fibre (bio) solubility rather than toxicity; repeat dose inhalation tests have been undertaken to determine chronic toxicity and carcinogenicity. Acute toxicity: oral : No data available: Repeated dose studies have been carried out using gavage. No effect was found.



• Skin corrosion/irritation: Not a chemical irritant according to test method OECD no. 404.

• Serious eye damage/irritation: Not possible to obtain acute toxicity information due to the morphology and chemical inertness of the substance.

• Respiratory or skin sensitization: No evidence from human epidemiological studies of any respiratory or skin sensitization potential.

• Germ cell mutagenicity/genotoxicity:Method: In vitro micronucleus test. Species: Hamster (CHO) Dose: 1-35 mg/ml. Routes of administration: In suspension. Results: Negative

• Carcinogenicity: Method: Inhalation, multi-dose. Species: Rat. Dose: 3 mg/m3, 9 mg/m3 and 16 mg/m3. Routes of administration: Nose only inhalation. Results: Fibrosis just reached significant levels at 16 and 9 mg/m3 but not at 3 mg/m3. None of the parenchymal tumor incidences were higher than the historical control values for this strain of animal. Method: Inhalation, single dose. Species: Rat. Dose: 30 mg/m3. Routes of administration: Nose only inhalation. Results: Rats were exposed to a single concentration of 200 WHO fibres/ml specially prepared RCF for 24 months. High incidence of exposure-related pulmonary neoplasms (bronchoalveolar adenomas and carcinomas) was observed. A small number of mesotheliomas were observed in each of the fibre exposure groups (Mast et al 1995a). Method: Inhalation, single dose. Species: Hamster. Dose: 30 mg/m3. Routes of administration: Nose only inhalation of 260 WHO fibres/ml specially prepared RCF for 18 months and developed lung fibrosis, a significant number of pleural mesotheliomas (42/102) but no primary lung tumors (McConnell et al 1995). Method: Inhalation, single dose on fibrous particles) RCF1a: 125 F/ml and 26 mg/m3 (2% of non fibrous particles) RCF1a: 125 F/ml and 26 mg/m3 (2% of non fibrous particles) Routes of administration: Nose only inhalation: Results: Rats were exposed to RCF1 and RCF1a for 3 weeks. The objective of the study was to compare lung retention and biological effects of the original RCF1 compared to RCF1a. The main difference of these 2 samples was the non-fibrous particle content of respectively 25% versus 2%. The post treatment observation was 12 months. Alveolar clearance was barely retarded after RCF1A exposure. After RCF1 exposure, however, a severe retardation of clearance was observed. (Bellmann et al 2001).

After intraperitoneal injection of ceramic fibres into rats in three experiments (Smith et al 1987, Pott et al 1987, Davis et al 1984), mesotheliomas were found in the abdominal cavity in two studies, while the third report (Pott et al 1987) had incomplete histopathology. Only a few mesotheliomas were found in the abdominal cavity of hamsters after intraperitoneal injection in one experiment (Smith et al 1987). However, the ceramic fibres tested were of relatively large diameter. When rats and hamsters were exposed via intraperitoneal injection, tumor incidence was related to fibre length and dose (Smith et al 1987, Pott et al 1987, Miller et al 1999, Pott et al 1989). (From SCOEL publication (EU Scientific Committee on Occupational Exposure Limits) SCOEL/SUM/165, September 2011).

• **Reproductive toxicity: Method:** Gavage. Species: Rat. Dose: 250mg/kg/day. Routes of administration: Oral Results: No effects were seen in an OECD 421 screening study. There are no reports of any reproductive toxic effects of mineral fibres. Exposure to these fibres is via inhalation and effects seen are in the lung. Clearance of fibres is via the gut and the feces, so exposure of the reproductive organs is extremely unlikely.

- STOT-Single exposure: Not applicable
- STOT-Repeated exposure: Not applicable
- Aspiration hazard: Not applicable

See the following review publications for a summary and discussion: Interpretation of these animal experiments is complex and there is not complete agreement amongst scientists internationally. A summary of the evidence relating to RCF carcinogenicity in vivo can be found in SCOEL/SUM/165 and in Utell and Maxim 2010. Other information Numerous studies indicate the relevance of biopersistence as a determinant of toxic effects of fibre exposure. (Maxim et al 2006).

Irritant Properties Negative results have been obtained in animal studies (EU method B 4) for skin irritation. Inhalation exposures using the nose only route produce simultaneous heavy exposures to the eyes, but no reports of excess eye irritation exist. Animals exposed by inhalation similarly show no evidence of respiratory tract irritation. Human data confirm that only mechanical irritation, resulting in itching, occurs in humans. Screening at manufacturers' plants in the UK has failed to show any human cases of skin conditions related to fibre exposure. (e) International Agency for Research on Cancer and National Toxicology Program

IARC, in 1988, Monograph v.43 (and later reaffirmed in 2002, v.81), classified RCF as possibly carcinogenic to humans (group 2B). IARC evaluated the possible health effects of RCF as follows: There is inadequate evidence in humans for the carcinogenicity of RCF. There is sufficient evidence in experimental animals for the carcinogenicity of RCF.

The Annual Report on Carcinogens (latest edition), prepared by NTP, classified respirable RCF as "reasonably anticipated" to be a carcinogen). Not classified by OSHA.



## **12. STABILITY AND REACTIVITY**

A. Ecotoxicity	No known aquatic toxicity.	
B. Persistence and degradability	These products are insoluble materials that remain stable over time and are chemically identical to inorganic compounds found in the soil and sediment; they remain inert in the natural environment.	
C. Bioaccumulative potential	No bioaccumulative potential.	
D. Mobility in soil	No mobility in soil.	
E. Other adverse effects (such as hazardous to the ozone layer)	No adverse effects of this material on the environment are anticipated.	

## **13. DISPOSAL CONSIDERATIONS**

- A. WASTE MANAGEMENT: To prevent waste materials from becoming airborne during waste storage, transportation and disposal, a covered container or plastic bagging is recommended.
- **B. DISPOSAL:** This product, as manufactured, is not classified as a hazardous waste according to Federal regulations (40 CFR 261). Any processing, use, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Under Federal regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a "hazardous" waste. Check local, regional, state or provincial regulations to identify all applicable disposal requirements.

## 14. TRANSPORT INFORMATION (Non-mandatory)

A. UN number	Not Applicable
B. UN proper shipping name	Not Applicable
C. Transport hazard class	Not Applicable
D. Packing group, if applicable	Not Applicable
E. Environmental hazards (e.g., Marine pollutant -Yes/No)	Not a marine pollutant
F. Incompatible materials	Not Applicable
G. Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises	Not Applicable

Canadian TDG Hazard Class & PIN: Not regulated Not classified as dangerous goods under ADR (road), RID (train) or IMDG (ship).

### **15. REGULATORY INFORMATION**

#### A. CANADIAN REGULATIONS

**Canada Canadian Workplace Hazardous Materials Information System (WHMIS 2015)** – Classified as Class D2A – Materials Causing Other Toxic Effects Canadian Environmental Protection Act (CEPA) - All substances in this product are listed, as required, on the Domestic Substance List (DSL)

#### **B. UNITED STATES REGULATIONS**

**OSHA** Comply with Hazard Communication Standards 29 CFR 1910.1200 and 29 CFR 1926.59 and the Respiratory Protection Standards 29 CFR 1910.134 and 29 CFR 1926.103.

**California** "Ceramic fibres (airborne particles of respirable size)" is listed in Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986 as a chemical known to the State of California to cause cancer.

**Other States** RCF products are not known to be regulated by states other than California; however, state and local OSHA and EPA regulations



## **16. OTHER INFORMATION**

#### Product Stewardship Program

FibreCast Inc. utilizes Unifrax LLC, the manufacturer of RCF and PCW to provide customers with up-to-date information regarding the proper use and handling of refractory ceramic fibre and polycrystalline mullite wools. In 2002, OSHA endorsed a five-year voluntary product stewardship program called PSP 2002. On May 23, 2007, HTIW Coalition's predecessor, RCFC, and its member companies renewed this voluntary product stewardship agreement with OSHA. On April 16, 2012, HTIW Coalition renewed this agreement. It was again renewed Oct 24th, 2017 for another 5 years. This latest five-year program, called PSP 2017, continues and builds upon the earlier programs. PSP 2017 continues to be a highly acclaimed, multifaceted strategic risk management initiative designed specifically to reduce workplace exposures to refractory ceramic fibre (RCF). For more information regarding PSP 2017, please visit http://www.htiwcoalition.org

## Note! The old Hazardous Materials Identification System (HMIS) Hazard Rating for rating RCF products [is now opposite of new GHS rating system]. The old ratings are below:

HMIS Health 1\* (\* denotes potential for chronic effects) - HMIS Flammability 0 - HMIS Reactivity 0 - HMIS Personal Protective Equipment X (To be determined by user)

Additional Information on After Service Material: As produced, all RCF fibres are vitreous (glassy) materials which do not contain crystalline silica. Continued exposure to elevated temperatures may cause these fibres to devitrify (become crystalline). The first crystalline formation (mullite) begins to occur at approximately 985° C (1805° F). Crystalline phase silica may begin to form at approximately 1100° C (2012° F). When the glass RCF fibres devitrify, they form a mixed mineral crystalline silica containing dust. The crystalline silica is trapped in grain boundaries within a matrix predominately consisting of mullite. The occurrence and extent of crystalline phase formation is dependent on the duration and temperature of exposure, fibre chemistry and/or the presence of fluxing agents or furnace contaminants. The presence of crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)" and additionally notes "carcinogenicity in humans was not detected in all industrial circumstances studied." IARC also studied mixed mineral crystalline silica containing dusts such as coal dusts (containing 5 – 15 % crystalline silica) and diatomaceous earth without seeing any evidence of disease. (IARC Monograph Vol. 68, 1997). NTP lists all polymorphs of crystalline silica amongst substances which may "reasonably be anticipated to be carcinogens".

IARC and NTP did not evaluate after-service RCF, which may contain various crystalline phases. However, an analysis of after-service RCF samples obtained pursuant to an exposure monitoring agreement with the USEPA, found that in the furnace conditions sampled, most did not contain detectable levels of crystalline silica. Other relevant RCF studies found that (1) simulated after-service RCF showed little, or no, activity where exposure was by inhalation or by intraperitoneal injection; and (2) after-service RCF was not cytotoxic to macrophage-like cells at concentrations up to 320 micrograms/cm<sup>2</sup> - by comparison, pure quartz or cristobalite were significantly active at much lower levels (circa 20 micrograms/cm<sup>2</sup>).

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	Carriage of Dangerous Goods by Road (International Regulation)
AES	Alkaline Earth Silicate Wools
ASW	Alumino-Silicate Wools
CAA	Clean Air Act
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
DSL	Domestic Substances List
EPA	Environmental Protection Agency
EU	European Union
f/cc	Fibers per cubic centimeter
HEPA	High Efficiency Particulate Air
HMIS	Hazardous Materials Identification System
HTIW	North American high temperature insulation wool industry
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods Code
mg/m <sup>3</sup>	Milligrams per cubic meter of air



### **16.1 Definitions Continued...**

mmpcf	Million particles per cubic meter
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
29 CFR 1910.1200 & 1926.59	OSHA Respiratory Protection Standards
29 CFR 1910.1200 & 1926.59:	OSHA Hazard Communication Standards
PCW	Polycrystalline Wools
PEL	Permissible Exposure Limit (OSHA)
PIN	Product Identification Number
PNOC	Particulates Not Otherwise Classified
PNOR	Particulates Not Otherwise Regulated
PSP	Product Stewardship Program
RCFA	Refractory Ceramic Fiber Association
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limit (NIOSH)
RID	Carriage of Dangerous Goods by Rail (International Regulations)
SARA	Superfund Amendments and Reauthorization Act
SARA Title III	Emergency Planning and Community Right to Know Act
SARA Section 302	Extremely Hazardous Substances
SARA Section 304	Emergency Release
SARA Section 311	MSDS/List of Chemicals and Hazardous Inventory
SARA Section 312	Emergency and Hazardous Inventory
SARA Section 313	Toxic Chemicals and Release Reporting
STEL	Short Term Exposure Limit
SVF	Synthetic Vitreous Fiber
TDG	Transportation of Dangerous Goods
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System (Canada)

16.2 Revision Summary: Updated SDS to align with the new WHMIS 2015 Regulation introduced, Feb 11th, 2015 and the updated PSP 2017. SDS Revision Date: August 9th, 2018 SDS Prepared By: G.E. Menzies P. Eng. ROH with support from UNIFRAX

#### 16.3 DISCLAIMER:

The information presented herein is presented in good faith and believed to be accurate as of the effective date of this Safety Data Sheet. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product. This summary of the relevant data reflects professional judgment; employers should note that information perceived to be less relevant has not been included in this SDS. Therefore, given the summary nature of this document, FibreCast Inc. does not

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