

**SDS FC Steelboard Adhesive**

Effective Date January 28th, 2019

**1. IDENTIFICATION****A. Product Identifier used on label:** FC Steelboard Adhesive**B. Other means of identification:** FC Top Gun 400 adhesive; Acrylic Urethane Sealant silver/gray; Elastomeric acrylic urethane sealant; water-resistant sealant; adhesive 400.**C. Recommended use of the product:** of the chemical - Primary Use: To adhere Steelboard or other insulation products to vessel walls primarily in industrial high temperature insulating applications. Tertiary Use: Installation, removal (industrial and professional) / Maintenance and service life (industrial and professional) Uses Advised Against: Dismantling product for use in other applications.**D. Uses Advised Against:** Dismantling product for reuse on other applications.**E. Suppliers Name:** FibreCast Incorporated, 3264 Mainway, Burlington, Ontario, Canada, L7M 1A7 Phone 905-319-1080; Fax 905-319-7611; email: [sales@fibrecast.com](mailto:sales@fibrecast.com)**F. Emergency Phone #:** CHEMTREC will provide assistance for chemical emergencies at 1-800-424-9300**2. HAZARDS IDENTIFICATION****A. Classification of the chemical:** CARCINOGENICITY - Category 1. SPECIFIC TARGET ORGAN TOXICITY based

on repeated exposures (central nervous system (CNS), kidneys) - Category 1

This product contains TiO<sub>2</sub> which has been classified as a GHS Carcinogen Category 2 based on its IARC 2B classification. For many products, TiO<sub>2</sub> is utilized as a raw material in a liquid coating formulation. In this case, the TiO<sub>2</sub> particles are bound in a matrix with no meaningful potential for human exposure to unbound particles of TiO<sub>2</sub> when the product is applied with a brush or roller or in a tube. Sanding the coating surface or mist from spray applications may be harmful depending on the duration and level of exposure and may require the use of appropriate personal protective equipment and/or engineering controls for repeated exposures.

**B. Signal Word:** Danger**Hazard Statements:** Prolonged or repeated contact may dry skin and cause irritation. May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS), kidneys)**C. Precautionary statements****Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear protective clothing. Wear eye or face protection. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.**Response:** Get medical attention if you feel unwell. If exposed or concerned: Get medical attention.**Disposal:** Dispose of contents and container in accordance with all local, regional, national and international regulations. % of the mixture consisting of ingredient(s) of unknown toxicity: 58.7% (Oral), 66.1% (Dermal), 49.9% (Inhalation)**General:** Read label before use. If medical advice is needed, Supplemental label elements when sanding or grinding. Contains isothiazolinones. May cause allergic reaction. Sanding and grinding dusts may be harmful if inhaled. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits oxide fumes when heated for first time.**3. COMPOSITION / INFORMATION ON INGREDIENTS****CAS number/other identifiers:** Product is a mixture of several ingredients:

Product name: ELASTOMERIC ACRYLIC URETHANE SEALANT- Colour: Silver to gray or other customer choices



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INGREDIENT NAME	Synonyms	% (w/w) Range	CAS number
Limestone	Not available.	10-30	1317-65-3
White mineral oil (petroleum)	Not available.	3-7	8042-47-5
Ethanediol	Not available.	0.5-1.5	107-21-1
Stoddard solvent	Not available.	0.5-1.5	8052-41-3
Titanium dioxide	Not available.	0.1-1	13463-67-7
Crystalline silica, (<10 microns)	Not available.	0.1 - 1	14808-60-7
1,2-benzisothiazol-3(2H)-one	Not available.	<0.1	2634-33-5

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#### 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:** Wash skin thoroughly with soap and water or a skin cleanser. Do not use solvents or thinners

**EYES:** In case of eye contact flush abundantly with water. Do not rub eyes. Seek medical advice. **NOSE AND THROAT:** Move to fresh air Keep person warm and at rest.

**INGESTION:** Seek medical attention. Show container label to medical person.

**B. Most important symptoms/effects, acute and delayed:** No known significant effects or critical hazards. Defatting to skin which may cause skin dryness. Treat symptomatically.

**C. Indication of immediate medical attention and special treatment needed, if necessary:** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested.

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#### 5. FIRE FIGHTING MEASURES

**A. Suitable extinguishing media** Use extinguishing agent suitable for surrounding combustible materials.

**B. Specific hazards:** In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous Decomposition Products: carbon

**C. Special precautions for fire-fighters:** Promptly isolate the scene. No action shall be taken without suitable training.

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#### 6. ACCIDENTAL RELEASE MEASURES

**A. Personal precautions, protective equipment, and emergency procedures:** Do not touch spilled material. Avoid breathing vapours. Wear appropriate personal protective equipment when ventilation is inadequate. When removing/tearing out product, minimize airborne dust. Compressed air or dry sweeping should not be used for cleaning up

**B. Methods and materials for containment and cleaning up:** Frequently clean the work area with wet sweeping to minimize the accumulation of debris. Do not use compressed air for clean-up. As most jurisdictions or regulations limit compressed air for cleaning purposes. Dispose waste via licenced waste disposal contractor.

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

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#### 7. HANDLING AND STORAGE

**Precautions for safe handling:**



- A. Protective measures:** Put on appropriate personal protective equipment. Avoid exposure - obtain 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 vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
- B. 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.
- C. Precautions for safe handling:** Do not store below the following temperature: 5°C (41°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed to prevent leakage. Do not store in unlabeled containers.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Occupational Exposure Limits for each ingredient

- Limestone: TWA 3mg/m<sup>3</sup> - 8 hours
- Mineral oil: TWA 5 mg/m<sup>3</sup> - 8 hours
- Ethanedoil: C 100 mg.m<sup>3</sup> as an aerosol
- Stoddard solvent: TWA 100 ppm – 8 hours
- Titanium dioxide: TWA 10 mg/m<sup>3</sup> – 8 Hours
- Crystalline silica as a respirable powder < 10 microns: TWA 0.1 mg/m<sup>3</sup> – 8 hours

**Appropriate engineering controls:** If user operations generate dust, fumes, gas, vapor or mist, use engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits [ re tearout operations]

**Individual Protection Measures:** Wash hands, forearms and face thoroughly after handling adhesive products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations are close to the workstation location.

**Eye Protection:** Use safety glasses with side shields

**Skin Protection:** Use chemical-resistant gloves.

**Body protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE</b> Liquid (can be coloured)	<b>EVAPORATION RATE</b> 0.05
<b>ODOUR</b> Ammoniacal	<b>FLAMMABILITY</b> Not applicable
<b>ODOUR THRESHOLD</b> Not applicable	<b>UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS</b> Not applicable
<b>Ph</b> 7.9	<b>VAPOR PRESSURE</b> 3.3 kPa



<b>MELTING POINT</b> Not Applicable	<b>VAPOR DENSITY</b> Not Applicable
<b>INITIAL BOILING POINT AND BOILING RANGE</b> 100 DEG C [212 DEG F]	<b>RELATIVE DENSITY</b> 1.16
<b>FLASH POINT</b> Not Applicable	<b>SOLUBILITY PARTIALLY</b> Soluble
<b>PARTITION COEFFICIENT</b> n-octanol/water	<b>DECOMPOSITION TEMPERATURE</b> Not Applicable
<b>VISCOSITY KINEMATIC</b> 40Deg C > 0.21 cm <sup>3</sup> /s	<b>AUTO-IGNITION TEMPERATURE</b> Not Applicable

## 10. STABILITY AND REACTIVITY

<b>A. Reactivity</b>	No specific test data available
<b>B. Chemical stability</b>	As supplied, product is stable.
<b>C. Possibility of hazardous reactions</b>	None
<b>D. Conditions to avoid</b>	High temperatures may produce decomposition products.
<b>E. Incompatible materials</b>	Oxidizing agents
<b>F. Hazardous decomposition products</b>	None after initial decomposition of binder.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicological Effects

- White mineral oil (petroleum) LD50 Oral Rat >5000 mg/kg
- ethanediol LD50 Dermal Rabbit 9.53 g/kg; LD50 Oral Rat 4700 mg/kg -
- Stoddard solvent LD50 Oral Rat >5 g/kg -
- Titanium dioxide LC50 Inhalation Dusts and mists Rat >6.82 mg/l 4 hours; LD50 Dermal Rabbit >5000 mg/kg LD50 Oral Rat >5000 mg/kg -
- 1,2-benzisothiazol-3(2H)-one LC50 Inhalation Dusts and mists Rat 0.4 mg/l 4 hours, LD50 Oral Rat 1020 mg/kg -

Classification: Product/ingredient name

Titanium dioxide - 2B/IARC -

Crystalline silica, respirable powder (<10 microns): 1/IARC Known to be a human carcinogen.

No information on reproductive toxicity or teratogenicity.

**Long term exposure and Potential delayed effects: Conclusion/Summary :** There are no data available on the mixture itself. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. This product contains TiO<sub>2</sub> which has been classified as a GHS Carcinogen Category 2 based on its IARC 2B classification. TiO<sub>2</sub> is utilized as a raw material in a liquid coating formulation. In this case, the TiO<sub>2</sub> particles are bound in a matrix with no meaningful potential for human exposure to unbound particles of TiO<sub>2</sub> when the product is applied with a brush or roller. Sanding the coating surface or mist from spray applications may be harmful depending on the duration and level of exposure and require the use of appropriate personal protective equipment and/or engineering controls.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption

through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion [no likely from a tube of adhesive] may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact



## 12. ECOLOGICAL INFORMATION

Do not apply directly to water or to areas where surface water is present, or to intertidal areas below the mean high-water mark. Do not contaminate water when disposing of equipment wash waters. Do not apply when weather conditions favor drift from target area. This chemical is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Do not contaminate water when disposing of equipment wash waters or rinsate.

## 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 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 Ontario regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a "hazardous" waste.

## 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. Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	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

### 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)

### 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 fibers (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 may apply to these products. If in doubt, contact your local regulatory agency.



## 16. OTHER INFORMATION

**16.1 Hazardous Materials Identification System (HMIS)** has ratings of 1 to 4 and are still shown on many MSDS / SDS. HMIS was created in 1980 and its rating system is the reverse of new Canadian GHS rating system. For this product, the following HMIS applies:

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

**16.2 Additional Information on After Service Material:** As produced, all RCF fibers are vitreous (glassy) materials which do not contain crystalline silica. Continued exposure to elevated temperatures may cause these fibers 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 fibers 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, fiber chemistry and/or the presence of fluxing agents or furnace contaminants. The presence of crystalline phases can be confirmed only through laboratory analysis of the "hot face" fiber. IARC's evaluation of crystalline silica states "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



## 16.2 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)

**16.3 Revision Summary:** Updated SDS to align with WHMIS 2015 Regulation dated Feb 11/15 Revision Date: January 25th, 2019.

**SDS Prepared By:** G.E. Menzies P. Eng. ROH.

## 16.4 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 extend any warranty (expressed or implied), assume any responsibility, or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user.