MATERIAL SAFETY DATA SHEET

Soller Composites, LLC

SECTION 1
CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Carbon Fiber

Product Codes: Carbon Fiber Fabric, 1K, 3K, 6K, 12K

Manufacturer's/Distributor's Name: Soller Composites, LLC

Manufacturer's/Distributor's Address:

Soller Composites, LLC
55 Industrial Park Dr
Franklin, NH 03235
603 9671 7016
815 642 9593

Emergency Telephone Number: **603 671 7016**
[9:00 am - 9:00 pm, M - F, EST]

Date Prepared: 6, 2017

SECTION 2
COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredient	CAS Registry No.	Weight %	Exposure Limits
Carbon fiber	7440-44-0	≥ 99%	See Note 1 below
Respirable fibrous carbon dust	not assigned	not known*	not known*

Notes on *Composition and Information on Ingredients*

*AMOUNT WILL BE DEPENDENT UPON METHOD OF HANDLING
NE = Not established

[1] OSHA and ACGIH have not established air contaminant limits for carbon fibers. Under certain conditions, this substance may be a nuisance dust. OSHA has an established standard for particulates not otherwise regulated (nuisance dust) set at 5 mg/m^3 (respirable fraction) and 15 mg/m^3 (total dust). ACGIH has established an exposure value of 3 mg/m^3 (respirable fraction) and 10 mg/m^3 (inhalable fraction) for particulates not otherwise classified.

SECTION 3
HAZARDS IDENTIFICATION

Emergency Overview

Black continuous carbon fiber. Not expected to present an immediate concern for emergency response personnel. Not expected to present an immediate acute health, reactivity, or flammability hazard. Not expected to present an environmental hazard.

POTENTIAL HEALTH EFFECTS

SKIN: May cause skin irritation. Mechanical irritation may occur from carbon fiber abrading or becoming imbedded in t skin. Chemical irritation may occur from exposure to sizing present on the carbon fiber.

EYES: Fragments of this product may cause mechanical eye irritation. Chemical irritation may occur from exposure to si present on the carbon fiber.

INHALATION: Inhalation exposure to respirable fibers of this product is not expected to occur under normal industrial conditions. Under very limited circumstances, however, exposure to respirable fibers of this product can occur and may in respiratory tract irritation.

INGESTION: Not expected to occur during industrial activities since ingestion is not a relevant route of exposure.

CHRONIC EFFECTS/CARCINOGENICITY: Not regulated as a carcinogen. There are no chronic effects/carcinogenicity da available on this product. Under very limited circumstances, exposure to respirable fibers of this product can occur and r result in respiratory tract irritation; prolonged exposure may result in more adverse effects. See Section 11 – *Toxicologic Information* for information on subchronic toxicity.

NTP: *Not listed*
IARC: *Not listed*
OSHA: *Not listed*

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

INCOMPATIBILITY: Not known.

SIGNS AND SYMPTOMS OF EXPOSURE: May result in slight skin and eye irritation.

SECTION 4
FIRST AID MEASURES

FIRST AID MEASURES

SKIN: Wash fibers off of skin with water and soap. If fibers are imbedded in the skin, remove with tweezers. Discard clo that may contain imbedded fibers. Get medical attention if exposure results in adverse effects.

EYES: Immediately flush with a continuous water stream for at least 20 minutes. Washing immediately after exposure is expected to be effective in preventing damage to the eyes. Get medical attention.

INHALATION: If there is inhalation exposure to the fibers of this product, remove source of exposure and move victim to fresh air. If not breathing give artificial respiration. If there is breathing difficulty, give oxygen. Get immediate medical attention for any respiratory problems.

INGESTION/SWALLOWED: Not expected to occur since ingestion is not a likely route of exposure for this product. If ing does occur, do not induce vomiting. Nothing by mouth if unconscious. Get immediate medical attention.

SECTION 5
FIRE FIGHTING MEASURES

FLASH POINT: Not applicable

EXPLOSION/FLAMMABLE LIMITS: Not applicable

AUTOIGNITION TEMPERATURE: Not applicable

EXTINGUISHING MEDIA: This material is not expected to burn in a fire. If this product is present in a fire, fight fire base the presence of flammable materials.

SPECIAL FIRE FIGHTING PROCEDURES: As in any fire, wear a self-contained breathing apparatus pressure demand (MSHA/NIOSH approved or equivalent) and full protective gear. Fight fires from a safe distance or protected areas. Fire hoses with fog nozzles may be used for controlling fires but care must be exercised not to spread flaming. Water may no always be effective for large fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Under high heat (> 750 °C), this product may react with oxygen to give ofl carbon oxides and other decomposition products.

OTHER INFORMATION: This product is not expected to burn. Do not incinerate carbon fibers since airborne fibers may electrical malfunctions. See Section 13 – *Disposal Considerations* for additional information.

SECTION 6
ACCIDENTAL RELEASE MEASURES

SPILL/RELEASE AND CLEANUP PROCEDURES: In case of spill, collect (*e.g.*, sweep up, vacuum, etc.) spilled material an either reuse or dispose of properly. Chopped or milled carbon fibers may be slippery if spilled posing an accident risk. W personal protective equipment as described in Section 8 during cleanup activities.

SECTION 7
HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in a cool, dry place. Wash hands with soap and water handling. Wear appropriate protective clothing as described in Section 8 during handling activities.

SECTION 8
EXPOSURE CONTROLS AND PERSONAL PROTECTION

RESPIRATORY PROTECTION: Normal use and processing of this product are not expected to generate carbon fiber dust. Respirable fibers of this product under certain very limited circumstances can be generated. In such circumstances, HEP respiratory protection should be used to prevent exposure

PROTECTIVE GLOVES: Latex gloves should be worn when handling this product. Rinse and remove gloves after use, an wash hand thoroughly with soap and water. Gloves should be removed and replaced if there are any signs of degradatior breakthrough.

PROTECTIVE CLOTHING: Wear protective clothing to minimize the potential for skin contact. An emergency shower sh be readily accessible. Discard any clothing that has become contaminated.

EYE PROTECTION: Wear safety goggles or glasses when handling or processing this product in any form.

AIR MONITORING: No information is available.

EXPOSURE GUIDELINES: OSHA and ACGIH have not established air contaminant limits for carbon fibers. Under certai conditions, this substance may be a nuisance dust. OSHA has an established standard for particulates not otherwise regu (nuisance dust) set at 5 mg/m^3 (respirable fraction) and 15 mg/m^3 (total dust). ACGIH has established an exposure valu mg/m^3 (respirable fraction) and 10 mg/m^3 (inhalable fraction) for particulates not otherwise classified.

SECTION 9
PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black continuous fiber
Odor:	None
Specific Gravity:	1.75 - 1.85
Vapor Pressure:	None
Melting Point:	Not applicable
Solubility in Water:	Insoluble

SECTION 10
STABILITY AND REACTIVITY

STABILITY: Stable.

CONDITIONS TO AVOID: None.

INCOMPATIBILITY/MATERIALS TO AVOID: Do not expose to strong oxidizing agents such as fluorine. Carbon fiber can violently with such compounds.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Not expected under normal conditions of processing and use. Therm decomposition of sizing may begin to occur at high temperatures (> 120 °C) resulting in the release of small amounts of nitrogen oxides, carbon monoxide, organic compounds, and other potentially hazardous substances.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11
TOXICOLOGICAL INFORMATION

ACUTE TOXICOLOGICAL DATA: There are no acute toxicological data available on this product. The oral, dermal, and inhalation acute toxicity are expected to be very low.

EYE IRRITATION DATA: No data are available.

SKIN IRRITATION DATA: No data are available.

SKIN SENSITIZATION DATA: No data are available.

SUBCHRONIC TOXICITY: Two subchronic inhalation tests in rats exposed to carbon fibers have been conducted. In one t rats were exposed to fibers for 16 weeks. Pulmonary function tests performed on the test animals before necropsy did nc show any significant or consistent changes. The only pulmonary finding related to exposure was the occurrence of phagocytosis by alveolar macrophages. No inflammation or fibrosis was observed. In the second study, rats were also exposed to carbon fibers for 16 weeks. Based on clinical signs, no effects due to exposure were observed. Histopatholog evaluation revealed non-fibrous particles in the pulmonary lymphoid clearance system and in alveolar macrophages. Th were no signs of fibrosis.

REPRODUCTIVE TOXICITY: No data are available.

TERATOGENICITY (birth defects): No data are available.

MUTAGENICITY: Several *in vitro* mutagenicity tests have been performed on carbon fibers. Carbon fibers have been fou be negative in the gene mutation assay in bacteria (Ames test), did not cause sister chromatid exchanges in Chinese ham ovary (CHO) cells, and did not cause unscheduled DNA synthesis in rat liver cells or forward mutations in studies with cells.

CHRONIC EFFECTS/CARCINOGENICITY: No data are available.

SECTION 12
ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL DATA: No data are available.

ENVIRONMENTAL FATE DATA: No data are available.

PHYSICAL/CHEMICAL PROPERTIES: No data are available.

SECTION 13
DISPOSAL CONSIDERATIONS

RCRA CLASSIFICATION: If discarded in its manufactured form, this product is not expected to be a characteristic or specifically listed hazardous waste under RCRA. However, it is the responsibility of the user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste

SPECIAL INSTRUCTIONS: Do not incinerate carbon fibers since airborne fibers may cause electrical malfunctions. Any disposal practices must be in compliance with federal, state, and local requirements.

SECTION 14
TRANSPORT INFORMATION

U.S./INTERNATIONAL SHIPPING INFORMATION UNDER DOT/IMO/IATA REGULATIONS: This product is not regulated as dangerous or hazardous goods under DOT, IMO, ICAO, IATA, or UN shipping regulations.

SECTION 15
REGULATORY INFORMATION

REGULATORY STATUS: This product, as well as its impurities, may trigger specific reporting, recordkeeping, and testing requirements under TSCA, EPCRA/SARA III, RCRA, CERCLA, CAA, SDWA, and CWA.

CALIFORNIA PROPOSITION 65: This product contains no chemicals known to the state of California to cause cancer or reproductive toxicity.

OTHER STATE CHEMICAL LISTS: This product contains no chemicals known to be present on any state chemical lists.

EPCRA/SARA TITLE III SECTION 313: This compound contains no toxic chemicals at or above the de-minimus threshold subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act 1986 and 40 CFR 372.

SECTION 16
OTHER INFORMATION

DISCLAIMER: This information is furnished without warranty, expressed or implied, except that it is believed to be accu to the best knowledge of Soller Composites, LLC. The information presented in this MSDS is related only to the specifi material designated herein. Soller Composites, LLC. assumes no legal responsibility for the use or reliance upon these d The user should review any recommendation in the specific context of the intended use to determine whether appropriat

Soller Composites, LLC assumes no responsibility for the use, misuse, and/or results of either, as related to any materials, product(s), information, and/or suggestions. Customers are strongly encouraged to, and should/must, research the proper safe use of such products and determine the suitability of each product for his or her individual application(s). Purchase of products from Soller Composites, LLC constitutes acceptance of these terms and any and all liability. Soller Composite, LLCs sole responsibility and/or liability are limited to the replacement of product or refund of purchase price.