

MATERIAL SAFETY DATA SHEET

MSDS IDENTIFICATION NAME: TYFO® SEH-51 Fabric
MSDS NUMBER: TYFO-SEH-51-001

DATE: April 12, 2010 **PAGE:** 1 OF 5
SUPERSEDES MSDS: 06/06/2000

SECTION I: MATERIAL AND MANUFACTURER IDENTIFICATION

MANUFACTURER:
FYFE CO. LLC
8380 Miralani Drive, Suite A
San Diego, CA 92126

EMERGENCY TELEPHONE NUMBER:
800-424-9300 or 703-527-3887
INFORMATION TELEPHONE NUMBER:
858-642-0694

PRODUCTION IDENTIFICATION NUMBER: TYFO® SEH-51 Fabric

CHEMICAL FAMILY: Glass Fiber, Aramid Fiber

SECTION II: HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	CAS NUMBER	% BY WEIGHT	OSHA(PEL)	ACGIH(TLV)
Fiberglass, continuous filament	65997-17-3	>96	$\frac{15 \text{ mg/m}^3 \text{ (Total)}}{5 \text{ mg/m}^3 \text{ (Respirable)}}$	$\frac{10 \text{ mg/m}^3}{3 \text{ mg/m}^3}$
0.022 Hot Melt		<1	None	None
Aramid Fiber	26125-61-1	<2	Not Established	Not Established
Water, Absorbed	7732-18-5	<1		
Sodium Sulfate	7757-82-6	<1		

SECTION III: HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: No unusual conditions are expected from this product.

APPEARANCE AND ODOR: White glass fibers woven with yellow aramid fibers into fabric of varying weight and thickness, depending on the style, with no distinctive odor.

STATEMENTS OF HAZARD:

CAUTION ! MAY CAUSE TEMPORARY MECHANICAL IRRITATION OF THE SKIN, EYES OR UPPER RESPIRATORY TRACT.

PRIMARY ROUTES OF EXPOSURE:

EYES--YES SKIN CONTACT--YES INHALATION--YES INGESTION--NO

HMIS RATING:

GLASS: HEALTH--2 FLAMMABILITY--1 REACTIVITY--0 SPECIAL—NONE
ARAMID: HEALTH--0 FLAMMABILITY--1 REACTIVITY--0 SPECIAL—NONE

SECTION III: HAZARD IDENTIFICATION (CONTINUED)**POTENTIAL HEALTH EFFECTS:**

EYES: Low Hazard. Fiber fly and dust may cause slight irritation to the eyes.

SKIN: Causes moderate skin irritation and sensitization. Contact with product at elevated temperature may cause thermal burns.

INHALATION: Fiber dust and fly from processing may be breathed into nose and throat. Working unprotected in dusty conditions may cause upper respiratory irritation and cold-like symptoms.

INGESTION: Ingestion unlikely under normal use. May cause gastrointestinal irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting conditions such as asthma, allergies, eczema and other lung and skin disorders may be aggravated by exposure to the product.

OTHER: The components present in this material at concentrations equal to or greater than 0.1 % are not listed or regulated by IARC, NTP, OSHA or ACGIH as a carcinogen, but glass filament is listed by IARC as Group 3 (not classifiable as to human carcinogenicity).

SECTION IV: FIRST AID MEASURES

EYES: In case of eye contact, flush eyes with water for at least 15 minutes. Avoid rubbing or scratching.

SKIN CONTACT: To relieve skin irritation, wash with soap and water. Use a washcloth to help remove the fibers. Avoid rubbing or scratching.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, qualified personnel may administer oxygen. Get medical attention.

INGESTION: Ingestion is very unlikely. If swallowed, get medical attention immediately. With all contact, get medical attention if irritation persists.

SECTION V: FIRE FIGHTING MEASURES

FLASH POINT/METHOD OF DETERMINATION: Non-Burning.

MEANS OF EXTINCTION: Use water-spray, foam, dry chemical or CO₂ to extinguish fires.

SPECIAL FIREFIGHTING PROCEDURES: Avoid exposure through use of a self-contained, positive-pressure breathing apparatus. Keep personnel removed and upwind of fire. Wear full protective equipment.

USUAL FIRE AND EXPLOSION HAZARDS: None anticipated. Burning of aramid fibers normally stops when ignition source is removed. Pulp and dust may continue to smolder once ignited. Aramid fiber dust does not present explosion hazards.

LEL: N/A

UEL: N/A

SECTION VI: ACCIDENTAL RELEASE MEASURES

PROCEDURES IN CASE OF ACCIDENTAL RELEASE OF LEAKAGE: Avoid contact with skin, eyes or clothing (See Section VIII). Clean up material, put into a suitable container and dispose of properly (See Section XIII). Avoid the use of dry sweeping or air jet blowing of fibers and dust, which can re-suspend respirable dust in the air.

SECTION VII: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in a cool, dry place. Maintain seal against contamination from dirt and moisture. Do not store in direct sunlight. Avoid drying of aramid to less than 4% moisture.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE/FACE PROTECTION: Wear safety glasses.

SKIN PROTECTION: Protective clothing such as a loose fitting long sleeved shirt that covers the base of the neck, long pants and gloves. Skin irritation is known to occur primarily at pressure points such as around the neck, wrist, waist and between the fingers.

RESPIRATORY PROTECTION: Ordinarily not required. If sufficient dust or fibers is generated during use of the product, use a nuisance dust respirator approved by NIOSH, as appropriate.

VENTILATION: Use local exhaust sufficient to control fibers of dust generated. If exhaust ventilation is not available or is inadequate use a dust respirator approved by NIOSH, as appropriate.

GENERAL HYGIENE RECOMMENDATIONS: Before eating, drinking, smoking or using toilet facilities, wash face and hands thoroughly with soap and water. Do not consume food or drinks in areas where they may be contaminated. Use vacuum equipment to remove fibers and dust from clothing and work areas. Compressed air is not recommended.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR	White with yellow fabric. No distinct odor.
MELTING POINT (°F/°C)	Glass will melt at 800 degrees C.
SPECIFIC GRAVITY (WATER=1)	1.45
pH OF UNDILUTED PRODUCT	Not determined
VOLATILE (PERCENT (%) BY WEIGHT)	0
PERCENT (%) VOC	Not determined
SOLUBILITY IN WATER	0-2 %
FILAMENT DIAMETER	Greater than 4.7 microns

SECTION X: STABILITY AND REACTIVITY

STABILITY: Stable under normal handling and storage conditions.

INCOMPATIBLE MATERIALS: None

PRODUCTS EVOLVED FROM HEAT OF COMBUSTION OR DECOMPOSITION: May decompose and release carbon dioxide, silicon dioxide, nitrogen oxide, ammonia, hydrogen chloride, traces of incompletely burned glass and aramid products and other unidentified gases and vapors which may be toxic. Avoid inhalation.

HAZARDOUS POLYMERIZATIONS: Will not occur under normal conditions of use. Rapid heating of the product in bulk may produce an uncontrolled exothermic reaction, which may char and decompose the finish, generating unidentified gases and vapors, which may be toxic. Avoid inhalation.

SECTION XI: TOXICOLOGICAL INFORMATION**MATERIAL OR COMPONENT TOXICITY DATA:****MEDIAN LETHAL DOSE (SPECIES):**

ORAL (LD ₅₀)	Not determined
INHALATION LC ₅₀)	Not determined
DERMAL (LD ₅₀)	Not determined

IRRITATION INDEX, ESTIMATION OF IRRITATION (SPECIES):

SKIN	Possible mechanical irritation and dermatitis
EYES	Possible mechanical irritation
INHALATION	Possible mechanical irritation

SECTION XII: ECOLOGICAL INFORMATION

No ecological data has been determined.

SECTION XIII: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Comply with all federal, state, provincial and local laws and regulations. Contact an appropriate waste disposal contractor and environmental agency. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

SECTION XIV: TRANSPORTATION INFORMATION**DOT AND IATA:**

PROPER SHIPPING NAME	Not regulated
HAZARD CLASS	Not regulated
IDENTIFICATION NUMBER	None
LABEL REQUIRED	None

SECTION XV: REGULATORY INFORMATION**SARA TITLE III:**

SECTION 302/304 EXTREMELY HAZARDOUS SUBSTANCE: None

SECTION 311 HAZARDOUS CATEGORIZATION: None

SECTION 313 TOXIC CHEMICALS: None

CERCLA SECTION 102(a) HAZARDOUS SUBSTANCE: None

SECTION XV: REGULATORY INFORMATION (CONTINUED)**WHMIS (CANADA):**

CLASSIFICATION: None

INGREDIENT DISCLOSURE LIST: Fibrous glass (CAS # 65997-17-3)

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986**(PROPOSITION 65):**

THE STATE OF CALIFORNIA HAS DETERMINED THAT THE FOLLOWING LISTED MATERIAL OR COMPONENT CHEMICALS IN THIS PRODUCT MAY CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM: **NONE**

ALL MATERIALS OR COMPONENTS OF THIS PRODUCT ARE EITHER LISTED OR ARE NOT REQUIRED TO BE LISTED IN THE EPA TSCA INVENTORY.

THIS PRODUCT DOES NOT CONTAIN OR IS NOT MANUFACTURED WITH OZONE DEPLETING SUBSTANCES AS IDENTIFIED IN THE TITLE VI, CLEAN AIR ACT "STRATOSPHERIC OZONE PROTECTION" AND THE REGULATIONS SET FORTH IN 40 CFR, PART 82.

SECTION XVI: OTHER INFORMATION**SPECIAL PRECAUTIONS:** None

EXPLANATION AND DISCLAIMER: Wherever such words or phrases as "hazardous," "toxic," carcinogen," appear herein, they are used as defined or described under state employee right-to-know laws, Federal OSHA laws or the direct sources for these laws such as the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), etc. The use of such words or phrases should not be taken to mean that we deem or imply any substance or exposure to be toxic, hazardous or otherwise harmful. **ANY EXPOSURE CAN ONLY BE UNDERSTOOD WITHIN THE ENTIRE CONTEXT OF ITS OCCURRENCE, WHICH INCLUDES SUCH FACTORS AS THE SUBSTANCE'S CHARACTERISTICS AS DEFINED IN THE MSDS, AMOUNT AND DURATION OF EXPOSURE, OTHER CHEMICALS PRESENT AND PREEXISTING INDIVIDUAL DIFFERENCES IN RESPONSE TO THE EXPOSURE.**

The data provided is based on the information received from our raw material suppliers and other sources believed to be reliable. **THIS DATA DOES NOT CONSTITUTE A GUARANTEE (EXPRESSED OR IMPLIED), WARRANTY (INCLUDING WARRANTY WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY US WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED OR IT'S USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO US. WE DISCLAIM LIABILITY FOR DAMAGE OR INJURY INCURRING DIRECTLY OR INDIRECTLY FROM THE USE OF THIS PRODUCT.**

APPROVED AND AUTHORIZED BY: *Edward R Fyfe*