April 2015

MATERIAL SAFETY DATA SHEET

INDUSTRIES 3R

IDENTITY

Part Number:	**KI 1590**
Identity:	Fiberglass, Continuous Filament
Description:	Fiberglass fabric for aluminium filtration

SUPPLIER

Industries 3R inc.
55, route 116 Ouest
Danville (Québec) J0A 1A0
Tel: 819-839-2793
Fax: 819-839-2797

COMPOSITION / INFORMATION ON INGREDIENTS

MATERIAL	*# CAS*	*%*
Fibrous glass (E-glass, continuous filament)	65997-17-3	>95 (typical)
Organic Surface Binder/Sizing	None.	<5 (typical)

E-glass is composed of principally oxides of silicon, aluminum and calcium, fused in an amorphous vitreous state.

PHYSICAL AND CHEMICAL PROPERTIES

Freezing/Melting Point:	>1472°F (800°C)
Boiling Point:	N/A (Not Available)
Specific Gravity (Water=1):	2.4 – 2.7 (bare glass)
Volume % Volatile:	0% (v/v), 0% (w/w)
Vapor Pressure:	N/A
Vapor Density (Air=1):	Not Applicable
Bulk Density:	N/A
Evaporative Rate:	N/A
Solubility	Insoluble
Odor:	Odorless
Color:	White or yellowish
pH:	N/A
Heat of Solution:	N/A
Physical State:	Solid
Flash Point	Closed cup: N/A (product does not sustain combustion)
Viscosity	N/A

FIRE-FIGHTING MEASURES

Flash Point: N/A, except for Needled Mat for AZDEL, Inc., which has a flash point >200 F (>93 C)

Extinguishing Media: Use extinguishers appropriate for surrounding fire.

Special Firefighting Procedures: Fiberglass itself will not support combustion, but in a sustained fire, proper protection against products of combustion from the fuel and sizing/binder must be worn. Needled mat products for AZDEL, Inc. will support combustion due to the surface treatment. Exposing these products to an ignition source will cause a burn-off of the surface binder, leaving a bare glass residual. Some

of the needled mat products for AZDEL, Inc. have a surface binder containing an organic peroxide and may burn in the absence of oxygen.

STABILITY AND REACTIVITY DATA

Stability: Stable. Texo HTM may release small amounts of acetic acid and other organix materials at elevated temperatures.
Hazardous Polymerization: Will not occur.
Incompatibility (Conditions/Materials to avoid): None known.
Hazardous Thermal Decomposition/Combustion Products: Fiberglass will not burn, but smoking of the product may occur at approximately 400-500 F (approximately 200-260 C) due to decomposition of the surface binder. Surface binders may decompose in a fire situation and release carbon monoxide, carbon dioxide and water. Additionally, there are many chemicals that can evolve during any partial decomposition of chemical products. The amounts or identities cannot be predicted and can differ in each situation.

HAZARDS IDENTIFICATION

Emergency Overview: WARNING! Fiberglass may cause mechanical irritation to the skin, eye and upper respiratory tract.
Precautions: Avoid contact with eyes. Avoid contact with skin. Avoid breathing dust. Do not swallow. Do not eat, drink or smoke in work area. Wash thoroughly after handling. Fiberglass needled mat products may contain broken steel needles, which can cause physical injury.

FIRST AID MEASURES

Inhalation: Remove from area to fresh air. If symptomatic, contact a poison control centre, emergency room or physician for treatment information.

Eye Contact: Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

Skin Contact: Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary. If glass fiber becomes embedded, seek medical information.

Ingestion: Gently wipe or rinse the inside of the mouth with water. Sips of water can be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician for treatment information.

HANDLING AND STORAGE

Storage Store at or below 25 C (77 F) and relative humidity less than 65% for optimum performance. Material is not an electrical conductor, and may accumulate static charge.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:
8-hour Time Weighted Average (TWA); 15-minute Short-Term Exposure Limit (STEL)
OSHA: 15 mg/m³ TWA. (total dust)
5 mg/m^3 TWA. (respirable dust)
ACGIH: 5 mg/m^3 TWA (inhalable fraction)
1 fiber/cm^3 TWA (respirable fraction)

Respiratory Protection: If use or application of this product generates dust, use an appropriate NIOSH-approved particulate filter respirator.

Ventilation: Use local exhaust or general room/dilution ventilation sufficient to maintain employee exposure below permissible exposure limits.

Eye and Face Protection: Standard safety glasses with side shields.
Protective Gloves: Use gloves to protect against physical irritation or injury if required by handling conditions.

Other Protective Equipment: Wear clean, body-covering clothing. Good personal hygiene and the use of barrier creams, caps, protective gloves, cotton coveralls or long sleeved loose fitting clothing will maximize comfort. Vacuum equipment may be used to remove fibers from clothes. Work clothing should be laundered separately from other clothing before reuse.

Key to abbreviations
A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists.
C = Ceiling Limit
S Potential skin absorption
SR = Respiratory sensitization
SS = Skin sensitization
TD = Total dust
TLV = Threshold Limit Value
TWA = Time Weighted Average
F = Fume
IPEL = Internal Permissible Exposure Limit
OSHA = Occupational Safety and Health Administration.
R = Respirable
Z = OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

ACCIDENTAL RELEASE MEASURES

Actions to be taken if material is released of spilled:
Sweep or gather up material and place in proper container for disposal or recovery. Use vacuuming or wet sweeping methods instead of dry sweeping.

TOXICOLOGICAL / ECOLOGICAL INFORMATION

Carcinogenicity Status: This product is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.
Medical Condition Aggravated: None known.
Effects of Overexposure:
Acute:

Eye: Dusts from thuis product may cayse temporary mechanical irritation to the eyes.
Skin: Dusts from this product may cause temporary mechanical irritation to the skin.
Inhalation: Dusts from this product may cause mechanical irritation of the nose, throat and respiratory tract.
Ingestion: Although ingestion of this product is not likely to occur in industrial applications, accidental ingestion may cause irritation of the mouth and gastrointestinal tract.

Chronic:
There are no known health effects from the long term use or contact with non-respirable continuous filament fibers, which is the type of fiber glass that PPG produces. Non-respirable fibers cannot reach the deep lung because they have a diameter of greater than 3.5 micrometers. Fibers of this diameter cannot penetrate the narrow, bending passages of the human respiratory tract to reach the lower regions of the lung and thus, have no possibility of causing serious pulmonary damage. Instead, they deposit on the surfaces of the upper respiratory tract, nose, or pharynx. These fibers are then cleared through normal physiological mechanisms.

Chopped, crushed or severely mechanically processed fiber glass may contain a very small amount of respirable fibers that could reach the deep lung. The measured airborne concentration of these respirable fibers in areas where severed processing of fiberglass occurred has been shown to be extremely low and well below the TLV. Repeated or prolonged exposure to respirable glass fibers may cause fibrosis, lung cancer and mesolthelioma. PPG fiber glass in the form supplied, does not contain respirable fibers.

Animal Study: In 2000, the Institute of Occupational Medicine (IOM) in Scotland published the results of a long term inhalation study in animals exposed to fibers that were manufactured to be RESPIRABLE. Animals were exposed to a very high concentration of these RESPIRABLE fibers (1022 fibers/cc for 5 hours/day, 7 days/week for 52 weeks). Exposure to these microfibers resulted in the development of fibrosis, lung cancer and mesothelioma as a result of the fibers being able to reach the lower regions of the lung. Chopped, crushed or severely mechanically processed fiber glass may contain a very small amount of respirable fibers that could reach the deep lung. The measured airborne concentration of these respirable fibers in areas where severe processing of fiberglass occurred has been shown to be extremely low and well below the TLV. Repeated or prolonged exposure to respirable glass fibres may cause fibrosis, lung cancer and mesothelioma. PPG fiber glass in the form supplied, does not contain respirable fibers. Epidemiology Studies: Two major studies in the US (performed by the University of Pittsburgh) and Europe (performed by the International Agency for Research on Cancer) showed no increase in lung cancer or respiratory disease among people working in production facilities producing NONRESPIRABLE continuous filament fiberglass. An additional smaller study performed in Canada also did not show an association between exposure of workers to fiber glass and respiratory cancer.

ECOLOGICAL INFORMATION

Fiberglass is generally considered to be an inert solid waste. No special precautions are needed incase of release or spill.

DISPOSAL CONSIDERATIONS

Disposal Method:

Waste material must be disposed of in in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled o disposed of through an approved waste management facility.

TRANSPORT INFORMATION

Not regulated.

REGULATORY INFORMATION

USA TSCA: This product is considered an article and is exempt from TSCA requirements.
EUROPE EINECS: This product is considered an article and is exempt from EINECS requirements.
CANADA DOMECTIC SUBSTANCES LIST (DSL): This product is considered an article and is exempt from DSL requirements.
Australia (AICS): This product is considered an article and is exempt from the Australian Inventory of Chemical Substances (AICS).
Korea ECL (KECI) : This product is considered an article and is exempt from the Korean Existing Chemicals Inventory, KECI, requirements.
Japan Miti (ENCS) : This product is considered an article and is exempt from the Japanese Existing and New Chemical Substances (ENCS) requirements).
Philippines (PICCS) : This product is not considered an article and is exempt from the Philippines Inventory of Chemicals and Chemical Substances, PICCS.

SARA TITLE III:

SARA 311/312 Hazard Class: NA
SARA (313) Chemicals: Not Listed

SARA Extremely Hazardous Substance: Not listed.
CERCLA Hazardous Substance: Not Listed.
CANADA REGULATIONS (WHMIS): Not Applicable.

OTHER INFORMATION

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.