

SECTION 1 IDENTIFICATION

1.1 Product Identifier

Product name: Fluorofab® 100-3 AS

100-5 AS 100-10 AS 100-14 AS

Synonyms: Anti-Static Black PTFE Coated Woven Glass

1.2 Relevant identified use of the product

Use of the Product: Industrial applications where high chemical and temperature resistance, excellent

release and anti-static properties to dissipate surface static build-up.

1.3 Details of the supplier of the safety data sheet

Company: Green Belting Industries Limited

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Mississauga ON L5T 2J3 Canada

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1.4 Emergency Telephone Number

North American +1 905 564 6712 Available between the hours 09:00 to 17:00 (EST)

Emergency Telephone

Number:

European Union +44 (0)1274 699425 Available between the hours 09:00 to 17:00

Emergency Telephone

Number:

(UTC/GMT)



SECTION 2 HAZARD IDENTIFICATION

2.1 Classification of the Product

European Not a classified substance or mixture according to Regulation (EC) No. 1272/2008.

Communities (EC): Not classified as dangerous according to Directive 67/548/EEC.

USA: Not a hazardous material as defined by 29 CFR1910.1200, OSHA Hazard

Communication Standard.

Canada: Not a controlled product under WHMIS.

2.2. Label elements

Symbol: None
Signal Word: N/A
Hazard Statement(s): N/A

Precautionary Statement: P261 – Avoid breathing any fume or dust that may be generated

P264 – Wash hands thoroughly after handling.

2.3. Other hazards

Use of this product is not normally considered hazardous, however material dust caused by cutting, sawing or sanding may cause eye or skin irritation. Processing at temperatures higher than 300°C can cause the evolution of particulate matter which can cause "polymer fume fever" which is a temporary condition that can cause flu-like symptoms and eye and respiratory irritation. The smoking of tobacco contaminated with PTFE can cause this condition. Processing at temperatures higher than 400°C will result in thermal decomposition of fluorinated thermoplastics and may release carbonyl fluoride which hydrolyses to hydrogen fluoride and carbon dioxide by reacting with moisture in the air. Thermal decomposition products may also include carbon monoxide and oxides of sulphur. In all cases avoid exposure, move the individual to fresh air and consult a physician if severe.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Nature of the Mixture: Black Anti-Static PTFE coated woven glass fabric

3.1 Substances

Not Applicable

3.2 Mixtures

| Ingredient Name | CAS Number | % by Weight | Exposure Limits | Symbol | Risk Phrases |
|-----------------------------------|-------------|-------------|-------------------------------------------------------------------|--------|--------------|
| Polytetrafluoroethylene | 9002-84-0 | 5 - 69 | N/A | None | None |
| Glass Fibre (fiberglass cloth) | 65997-17-3 | 31 - 95 | OSHA PEL - 5 mg/m ³ ACGIH TLV - 5 mg/m ³ | None | None |
| Proprietary Additive | Proprietary | 1 - 2 | N/A | None | None |

The above product(s) are defined under the European Union's REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) regulation as articles, and as such are exempt from the material safety data sheet provisions of 29 CFR 1910.1200(G).

None of the product components are intentionally released during their use when used as intended and in accordance with recommended specifications and parameters.

This product is REACH compliant and does not contain REACH SVHCs (Substances of Very High Concern) materials and is considered non-hazardous when used as intended and in accordance with recommended specifications and parameters.

For full text of the R-phrases mentioned in this Section, see Section 16.

For full text of the H-statements mentioned in this Section, see Section 16.



SECTION 4 FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Never give anything by mouth to an unconscious person. When symptoms persist or in

all cases of doubt seek medical advice.

Inhalation: N/A for material as supplied at room temperature and used as intended and in

accordance with recommended specifications and parameters. Processing at high temperature may generate fumes which can cause "polymer fume fever" leading to flu-

like symptoms. Remove to fresh air and consult a physician if severe.

Skin Contact: Not normally considered hazardous, however material dust caused by cutting, sawing or

sanding may cause skin irritation. Wash with plenty of soap and water. If irritation

persists get medical attention.

Eye Contact: Material dust caused by cutting, sawing or sanding may cause eye irritation. Wash with

plenty of soap and water. If irritation persists get medical attention.

Ingestion: If swallowed get medical advice. Do not induce vomiting unless instructed to do so by

medical personnel.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Local irritation.

The thermal decomposition vapours of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco. Symptoms may be delayed. Repeated episodes of polymer fume fever may result in persistent lung effects. Inhalation of decomposition products from overheating

may cause lung irritation or shortness of breath.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media: Water spray, Carbon dioxide (CO2), Foam, Dry Chemical

5.2 Special hazards arising from the product

Specific hazards during fire- Hazardous thermal decomposition products.

fighting: Hydrogen fluoride, fluorinated compounds, carbon oxides,

perfluoroisobutylene, tetrafluoroethylene, hexafluoropropylene and

trifluoromethane and oxides of sulphur.

Exposure to decomposition products can be a hazard to health.



SECTION 5 FIRE FIGHTING MEASURES

5.3 Advice for firefighters

Special protective equipment Wear self-contained breathing apparatus and protective suit. Wear neoprene

for firefighters: gloves during cleaning up work after a fire.

Further information: Protect from hydrogen fluoride fumes which react with water to form

hydrofluoric acid.

Observe local regulations when contaminated water and burning waste are

removed.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Personal precautions: For solid product none required.

For dusts and fibres generated during fabrication use protective equipment to

prevent the contamination of skin, eyes, and clothing.

6.2 Environmental Precautions

Environmental N/A - solid product

Precautions

6.3 Methods and materials for containment and cleaning up

For solid product collect with hands broom and shovel and place in non-hazardous waste collection container for disposal.

For dusts and fibres generated during fabrication vacuum up and containerise.

6.4 Reference to other sections

For disposal instructions see section 13.

SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling: Solid product which presents minimal hazards to personnel when handling in

accordance with operating and storage recommendations.

The primary health hazards associated with this product are the generation of dust during fabrication and the inhalation of thermal decomposition products when the

product is subjected to temperatures greater than $300\,^{\circ}\text{C}.$

Provide appropriate exhaust ventilation at places where dust or volatiles can be

generated.

Wash hands thoroughly before smoking as tobacco contaminated with PTFE can

cause "polymer fume fever".

Advice on protection against fire and

Dispose of in accordance with local regulations as a solid non-hazardous waste and

avoid inappropriate disposal practices.

explosion: Do not incinerate polytetrafluoroethylene (PTFE) waste.

Provide appropriate exhaust ventilation at places where dust or volatiles can be

generated.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for

No special precautions necessary, but recommend storing in a dry cool place and

storage areas and protecting from contamination.

containers:



Advice on common

No special restrictions on storage with other products. Keep away from tobacco

storage:

products.

Storage temperature:

No special restrictions.

Other data: Do not store in direct sunlight or in conditions of high humidity.

| SECTION 8 EXPOSURE CO | ONTROLS / PERSO | NAL PROTECTION | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| 8.1 Control Parameters | | | | | |
| In situations in confined s | • | perfluoroisobutylene | TLV TWA 10ppb | TLV STEL - | IDLH (NIOSH) - |
| the temperature of the polymer exceeds 500°F (260° C), thermal degradation products may be produced. Exposure limits for these products, which include perfluoroisobutylene, carbonyl fluoride and hydrogen fluoride, must not be exceeded. | | carbonyl fluoride | 2ppm TWA | 5ppm | - |
| | | hydrogen fluoride | 0.5ppm | 2ppm ceiling | 30ppm |
| | | proprietary additive | 3.0mg/m ³ | - | 3.5mg/m³ TWA |
| | | | OSHA-PEL | ACGIH-TLV | <u>Other</u> |
| In situations where high lairborne dust/glassfibres specified exposure limits exceeded. 8.2 Exposure Controls Engineering measures: | are present must not be | ng or sanding of the proc | 5mg/m³ – nuisance dust PEL (respirable dust fraction) 15mg/m³ – 8 hour TWA (total dust fraction) | 5mg/m ³ - 8 hour TWA (inhalable) 1 fiber/cm ³ - 8 hour TWA (respirable) | 3 x 10 ⁶ fibers/m³ - 10 hour TWA (NIOSH) |
| Engineering measures. | If cutting, sawing or sanding of the product is necessary, to maintain exposures below recommended limits, a properly designed dust collection system is recommended at the operation source. Adequate ventilation must be provided when working with the product at elevated temperatures. | | | | |
| Eye protection: | Throughout basic product handling processes, and whenever handling materials containing fiberglass, safety glasses, goggles or face shields should be worn. | | | | |
| Hand protection: | Throughout basic product handling processes, leather or synthetic fibre gloves are recommended to minimize cuts and abrasions. | | | | |
| Skin and body protection: | and long trouse irritation from | a loose fitting long sleevers is recommended to ne exposure to fiberglass is the neck, wrist and wais | ninimise exposur known to occur | e to fiberglass | . Skin |



Hygiene measures: Handle in accordance with good industrial hygiene and safety practices.

Wash hands immediately after handling the product and do not contaminate

tobacco products.

Be careful not to rub or scratch areas irritated from fiberglass exposure, as fibres may be forced into the skin. Wash off any fiberglass in contact with the skin, and

consider the use of barrier creams which can minimise irritation.

Always use vacuum equipment to remove fibres and dust from clothing and never

use compressed air.

Contaminated clothes should always be washed separately.

Respiratory protection: Not required for normal use of the product.

In situations where high levels of airborne dust/glassfibres are present and which

exceed permissible exposure limits, or irritation occurs, then a correctly fitting

NIOSH/MHSA approved disposable dust respirator should be used.

In situations in confined spaces where the temperature of the polymer exceeds

500°F (260° C), an air supplied respirator should be used.

In situations where high levels of airborne dust/glassfibres or fume, use industrial

hygiene monitoring to ensure that TLV or PEL values are not exceeded. Excessive exposure to thermal degradation products could result in delayed pulmonary edema and in some cases, and on very high exposure damage to the liver and kidneys. These substances may include perfluoroisobutylene (TLV = 10ppb), carbonyl fluoride (TLV = 2ppm TWA, 5ppm STEL), hydrogen fluoride (TLV =

2ppm ceiling, 0.5ppm TWA).

| SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES | | | | |
|-----------------------------------------------------------|-------------------------------|-----------------------------------------------|---------------|--|
| 9.1 Information on basic physical and chemical properties | | | | |
| Appearance: | Black, various thicknesses | Upper/lower flammability or explosive limits: | N/A | |
| Physical state: | Solid | Vapour pressure: | N/A | |
| Odour: | Odourless | Vapour density: | N/A | |
| Odour threshold: | N/A | Relative density: | N/D | |
| pH: | N/A | Solubility(ies): | Insoluble | |
| Melting point/freezing point: | N/A | Partition coefficient: n- octanol/water: | N/A | |
| Initial boiling point and boiling range: | N/A | Auto-ignition temperature: | N/A | |
| Flash point: | N/A | Decomposition temperature: | 572°F (300°C) | |
| Evaporation rate: | N/A | Viscosity: | N/A | |
| Flammability (solid, gas): | N/D | | | |



SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity: Stable at normal ambient temperature and pressure

10.2 Chemical stability: Product is chemically stable

10.3 Possible hazardous reactions: Stable under recommended storage conditions

10.4 Conditions to avoid: Avoid heating for prolonged periods above the recommended

upper usage limit

10.5 Incompatible materials: Alkali metals, Strong oxidizing agents, Halogenated compounds

10.6 Hazardous decomposition products: May include:

Fluorinated hydrocarbons, Carbonyl fluoride, Hydrogen fluoride, carbon oxides, perfluoroisobutylene, tetrafluoroethylene, hexafluoropropylene, trifluoromethane, oxides of sulphur.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity Polytetrafluoroethylene Proprietary Additive

LD50 / rat : > 11,280 mg/kg LD50 / rat : > 8,000 mg/kg

Skin irritation May cause skin irritation in susceptible persons.

Polytetrafluoroethylene Polytetrafluoroethylene

Human Rabbit

Classification: Not classified as Classifi

irritant

ssified as Classification: Not classified as irritant
Result: No skin irritation

Result: NO SKIN IFFICATION

Result: No skin irritation

Proprietary Additive Proprietary Additive

No data available Rabbit

Classification: Not classified as irritant

Result: No skin irritation

Eye irritation Polytetrafluoroethylene Proprietary Additive

Mild eye irritation Rabbit

Classification: Not classified as irritant

Result: No eye irritation

Sensitisation Polytetrafluoroethylene and Proprietary Additive

Human

Classification: Not a skin sensitizer. Result: Does not cause skin sensitization.

Patch test on human volunteers did not demonstrate sensitization properties.



Repeated dose toxicity Polytetrafluoroethylene and Proprietary Additive

Oral - feed rat - no toxicologically significant effects were found.

Mutagenicity assessment Polytetrafluoroethylene and Proprietary Additive

Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity assessment Polytetrafluoroethylene Proprietary Additive

Not classifiable as a human IARC classification as 2B (possibly

carcinogen carcinogenic to humans) but not a hazardous

substance according to GHS

Toxicity to reproduction

assessment

Polytetrafluoroethylene and Proprietary Additive

No toxicity to reproduction

STOT-Single exposure No data available

STOT-Repeated exposure No data available

Aspiration hazard Not applicable

SECTION 12 ECOLOGICAL INFORMATION

12.1 Toxicity Toxicity to fish (Polytetrafluoroethylene and Proprietary

Additive) - the substance is a polymer and is not expected to

produce toxic effects.

no data available

no data available

12.2 Persistence and degradability no data available
12.3 Bio-accumulative potential no data available

12.3 Bio-accumulative potential 12.4 Mobility in soil

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

Additional ecological information no data is available on the product itself.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product Where possible recycling is preferred to disposal or incineration. Dispose of in accordance

with local regulations. Incinerate only if incinerator is capable of scrubbing out hydrogen $% \left(1\right) =\left(1\right) \left(1\right) \left($

fluoride and other acidic combustion products.



| SECTION 14 TRANSPORT INFORMATION | | | | | | |
|--------------------------------------------------------------------------------|----------------|----------------------------------------------------------|----------------------------------|------------------|--------------------------|--|
| | 14.1 | 14.2 | 14.3 | 14.4 | 14.5 | |
| | UN Number | Proper Shipping Name | Transport Hazard Class(es) | Packing Group | Environmental Hazards | |
| DOT | Not Applicable | Not Applicable | Not Applicable | Not Applicable | None | |
| ADR | Not Applicable | Not Applicable | Not Applicable | Not Applicable | None | |
| IATA/ICAO | Not Applicable | Not Applicable | Not Applicable | Not Applicable | None | |
| IMO/IMDG | Not Applicable | Not Applicable | Not Applicable | Not Applicable | None | |
| 14.6 Special precautions for user: | | Not classified as dangerous in the meaning of transport. | | | | |
| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: | | Not applicable | | | | |

SECTION 15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

USA

TSCA Status: All ingredients in the product are listed in the TSCA inventory

SARA Title III

Sec. 303/304: None

Sec. 311/312: Not applicable
Sec 313: Not applicable
CERCLA RQ: Not applicable

California Prop 65: This product does not contain chemicals known to the State of California to

cause cancer of the reproductive system.

State Right-to-Know Lists: Massachusetts, New Jersey, Pennsylvania: This product does not contain any

chemicals listed for state right to know purposes.

Canada This product has been classified in accordance with the hazard criteria of the

Controlled Products Regulations and the SDS contains all the information

required by the Controlled Products Regulations.

WHMIS Classification:

(for workplace exposures)

Not controlled



New Substance All ingredients in this product are listed, as required, on Canada's Domestic

Notification Regulations: Substances List (DSL).

NPRI Substances: Not applicable.

EC Classification for the Substance/Preparation

Symbol: This product is not classified as dangerous according to Directive 1999/45/EC

and its amendments.

German Water Hazard

Class

German Water Hazard Class WGK nwg. Non-water polluting substance.

Other regulations: Take note of Directive 98/24/EC on the protection of the health and safety of

workers from the risks related to chemical agents at work.

15.2 Chemical Safety Assessment

No data available

SECTION 16 OTHER INFORMATION

Text of R-phrases referred to in Section 3: N/A

Text of H-Statements referred to in section 3: N/A

Preparation Information:

Prepared by: Green Belting Industries Limited

www.greenbelting.com

Revision Date: 7 December 2013

Revision Summary: Review of regulatory, hazard classification, exposure and

toxicology data. No revisions to date.

Abbreviations and acronyms:

| Section | Abbreviation | Description |
|---------|--------------|-----------------------------------------------------------|
| 2 | CFR | Code of Federal Regulations |
| 3 | CAS | Chemical Abstracts Services |
| 3 | OSHA | Occupational Safety and Health Administration USA |
| 3 | ACGIH | American Conference of Governmental Industrial Hygienists |
| 3 | PEL | Permissible Exposure Limit |
| 3 | TLV | Threshold Limit Value |
| 3 | SVHC | Substances of Very High Concern |
| 8 | TWA | Time Weighted Average |
| 8 | STEL | Short-Term Exposure Limit |
| 8 | IDLH | Immediately Dangerous to Life or Health (NIOSH) |
| 8 | NIOSH | National Institute for Occupational Safety and Health |



| 8 | ppm | Parts per Million | | |
|-------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--|--|
| 8 | ppb | Parts per Billion | | |
| 11 | LD ₅₀ | Lethal Dose, 50%" or median lethal dose (amount of substance required by | | |
| | | body weight to kill 50% of the test population | | |
| 11 | STOT | Specific Target Organ Toxicity | | |
| 12 | PBT | Persistent, Bio-accumulative and Toxic | | |
| 12 | vPvB | Very Persistent and Very Bio-accumulative | | |
| 14 | DOT | Department of Transport | | |
| 14 | ADR | Agreement on Dangerous Goods | | |
| 14 | IATA | International Air Transport Association | | |
| 14 | ACAO | International Civil Aviation Organisation | | |
| 14 | IMO | International Maritime Organization | | |
| 14 | IMDG | International Maritime Dangerous Goods | | |
| 14 | TSCA | Toxic Substances Control Act | | |
| 15 | SARA | Superfund Amendments and Reauthorization Act | | |
| 15 | CERCLA RQ | Comprehensive Environmental Response Compensation and Liability Act | | |
| 15 | WGK | German Water Hazard Class | | |
| 15 | WHMIS | Workplace Hazardous Materials Information System | | |
| Disclaimer: | The information provided in this Safety Data Sheet is correct to the best of our knowledge, | | | |
| | information, and belief at the date of its publication. The information given is designed only | | | |
| | as a guide for safe handling, use, processing, storage, transportation, disposal, and release | | | |
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