1. Product and Company Identification

Material name: POLYESTER LOW DENIER FILAMENT FIBER
SDS # SHY01
Revision date: May 2015
Company information: Durafiber Technologies
13620 Reese Boulevard, Suite 400
Huntersville, NC 28078

24 Hour Emergency Number: 855-393-9888

2. Hazards Identification

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CR 1910.1200)

GHS – US Classification

Hazard Pictograms (GHS-US)- None
Signal Word (GHS-US)-None

Hazard Statements (GHS-US)-None

Precautionary Statements (GHS-US)-None

General Hazard Information

Low hazard exists for usual industrial or commercial handling. When the fiber products are cut, chopped, or manipulated in other similar handling methods, some dust may be produced.

This fiber may have been produced using lubricants, additives and/or finishes. If this fiber contains any of these materials in an amount that may present a hazard, or requires additional precautions during normal handling and use, additional information has been included in the appropriate section in this SDS.

An antimony-containing compound, is used as a catalyst during the polymerization of our polyester from raw materials. Virtually all commercially available thermoplastic polyester is produced using antimony-containing catalysts that remain firmly embedded in the polymer matrix. The average content amounts to less than 0.04% (corresponding to less than 400 ppm).

Molten polymer or prolonged air drying of polymer at temperatures above 195°C will release small quantities of acetaldehyde (CAS# 75-07-0). May have been produced with Carbon Black. Carbon Black is not water soluble and is encapsulated. It is not extracted or released in normal processing. Therefore Carbon Black in this material does not present a hazard in normal handling, processing use and disposal. May have been produced with Titanium Dioxide. Titanium Dioxide is not water soluble and is encapsulated. It is not extracted or released in normal processing. Therefore Titanium Dioxide in this material does not present a hazard in normal handling, processing use and disposal.
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3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS#</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLYETHYLENE TEREPHTHALATE</td>
<td>POLYMER</td>
<td>90-99.9%</td>
</tr>
<tr>
<td>TITANIUM DIOXIDE</td>
<td>13463-67-7</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>CARBON BLACK</td>
<td>1333-86-4</td>
<td>0-3%</td>
</tr>
<tr>
<td>FIBER LUBRICANTS</td>
<td>PROPRIETARY</td>
<td>0.02-2%</td>
</tr>
</tbody>
</table>

Composition comments

One or more of the ingredients have been claimed as trade secret under the OSHA Hazard Communication Standard. The hazards of this (these) ingredient(s), if any, are given on this SDS.

4. First Aid Measures

First aid procedures

**Eye contact**
Flush eye with water as a precaution. If irritation persists get medical attention.

**Skin contact**
Product is not expected to be hazardous by skin contact. Should irritation occur, rinse with water.

**Inhalation**
No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention, if cough or other symptoms develop.

**Ingestion**
If swallowed, do NOT induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Consult a physician if necessary.

5. Fire Fighting Measures

**Flammable properties**
May burn, but does not ignite readily.

**Extinguishing media**

**Suitable extinguishing media**
Use dry chemical, CO2, water spray or regular foam.

**Unsuitable extinguishing media**
Do not use a solid water stream as it may scatter and spread fire.

**Protection of firefighters**

**Protective equipment and precautions for firefighters**
Firefighters should wear full protective clothing including a self contained breathing apparatus.
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Hazardous combustion products
Irritating and toxic gases or fumes may be released during a fire. Included are carbon monoxide, carbon dioxide, various hydrocarbon fragments, as well as, thick smoke.

Flammability
Not determined

6. Accidental Release Measures
   Methods for cleaning up
Sweep up or gather material and place in appropriate container.

7. Handling and Storage
   Handling
Use care in handling/storage.

   Storage
Keep away from heat, sparks, and flame.

Further information
When fiber products are cut, chopped, or manipulated in other similar handling methods, some dust may be produced. Use good housekeeping methods to keep accumulation of dust to a minimum.

8. Exposure Controls/Personal Protection
   Exposure guidelines
Molten polymer or prolonged air drying of polymer at temperatures above 195 °C will release small quantities of acetaldehyde (CAS# 75-07-0)

   NIOSH – Pocket Guide-IDLHs (Immediately Dangerous to Life or Health)
   Acetaldehyde 75-07-0 2000 ppm IDLH

   U.S. – OSHA-Final PELs-Time Weighted Averages (TWAs)
   Acetaldehyde 75-07-0 200 ppm TWA; 360 mg/m3 TWA

   U.S. – OSHA-Vacated PELs-TWAs
   Acetaldehyde 75-07-0 100 ppm TWA; 180 mg/m3 TWA

   ACGIH-Threshold Limits Values – Ceilings (TLV-C)
   Acetaldehyde 75-07-0 25 ppm Ceiling

   ACGIH – Threshold Limits Values – TLV Basis – Critical Effects
   Acetaldehyde 75-07-0 eye and upper respiratory tract irritation

Engineering controls
Use local exhaust ventilation to keep formation of airborne dusts to a minimum when the fiber products are cut, chopped, or manipulated in other similar handling methods.

Personal protective equipment
   Eye / face protection
When the fiber products are cut, chopped, or manipulated in other similar handling methods, it may be necessary to wear safety glasses with side shields.

   Skin protection
Wear suitable protective clothing. When material is heated, wear gloves to protect against thermal burns.
Respiratory protection
When dust or thermal processing fumes are generated and ventilation is not sufficient to effectively remove them, appropriate respiratory protection must be provided.

General hygiene considerations
Use good industrial hygiene practices in handling this material. Wash hands before breaks and at the end of workday.

9. Physical & Chemical Properties
   Form/Appearance  Material is a low denier filament yarn.
   Color  Based on specification.
   Odor  None.
   Flammability  Not Determined
   Melting point  482-572 ºF(250-300 ºC)
   Odor threshold  Not Determined
   Solubility (H2O)  Insoluble
   VOC (Weight %)  0.5% estimated

10. Chemical Stability & Reactivity Information
   Chemical stability
   Stable, however, may decompose if heated.

   Conditions to avoid
   Heat, flames and sparks.

   Incompatible materials
   This product may react with strong oxidizing agents.

11. Toxicological Information
   Potential health effects
   Eyes
   Fiber particles and dusts may be mechanically irritating when in contact with eyes. Symptoms include itching, burning, redness and tearing.
   Skin
   Not expected to be a primary skin irritant. Fiber particles and dusts may be mechanically irritating to skin. While irritation is not expected under normal use, prolonged exposure and continuous rubbing of fiber particles on skin may produce skin irritation. Symptoms of mechanical irritation may include redness and/or itching.
   Inhalation
   Health injuries are not known or expected under normal use.
   Ingestion
   Not a likely route of entry. Ingestion of large amounts of fibers may cause gastrointestinal blockage which can cause stomach distress
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Toxicological information
Due to this material’s high molecular weight, and results of toxicity studies of similar products, this material is considered to be of little to no toxicological concern. This fiber may have been produced with Carbon Black and/or Titanium Dioxide. These compounds, as present in this material, are not water soluble and are encapsulated in the polymer. They are not extracted or released in normal processing and handling. Therefore these compounds are not expected to present a hazard in normal handling, processing, use and disposal.

Component analysis – LD50

| Toxicology Data – Selected LDS50s and LC50s | Inhalation LC50 Rat: 13300 mg/kg/4H; Oral LD50 Rat:661 g/kg; Desmal LD50 Rabbit:3540 mg/kg |
| Acetaldehyde | 75-07-0 |

Carcinogenicity
Carbon Black (airborne particles of respirable size) is a listed carcinogen. Carbon Black used in production of this material is encapsulated and not believed to have the potential to become of respirable size. Titanium Dioxide (airborne particles of respirable size) is a listed carcinogen by IARC (2B). Titanium Dioxide used in products of this material is not believed to have the potential to become of respirable size.

| NIOSH – Pocket Guide – Potential Occupational Carcinogens |
| Acetaldehyde | 75-07-0 | Potential occupational carcinogen |

| IARC – Group 2B (Possibly Carcinogenic to Humans) |
| Acetaldehyde | 75-07-0 | Monograph 71 (1999) Supplement 7 (1987), Monograph |

| ACGIH – Threshold Limits Values – Carcinogens |
| Acetaldehyde | 75-07-0 | A3 – Confirmed animal carcinogen with unknown relevance to humans |

| NTP (National Toxicology Program) – Report on Carcinogens – Reasonably Anticipated to be Human Carcinogens |
| Acetaldehyde | 75-07-0 | Reasonably Anticipated to be a carcinogen |

| U.S. – OSHA – Hazard Communication Carcinogens |
| Acetaldehyde | 75-07-0 | Present |

Skin contact
Similar products produced no irritation or sensitization in skin tests on human subjects.

12. Ecological Information

Ecotoxicity
This product is not expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. Based on similar substances, this material is expected to be essentially non-biodegradable.

Environmental effects
Based on the physical properties of this product, significant environmental persistence and bioaccumulation would not be expected.

| Ecotoxicity – Freshwater Fish Species Data |
| Acetaldehyde | 75-07-0 | 96 Hr LC50 Pimehales promedas; 30.8 mg/L(flow-through); 95 H LC50 Lepomis macrochinus; 53 mg/L(static) |

| Ecotoxicity – Microtox Data |
| Acetaldehyde | 75-07-0 | 5 min ED50 Photobacterium phosphoreum; 280.6 mg/L; 15 min ED50 Photobacterium phosphoreum; 280.6 mg/L; 25 min ED50 Photobacterium phosphoreum; 280.6 mg/L |

| Ecotoxicity – Water Flea Data |
| Acetaldehyde | 75-07-0 | 48 Hr EC50 water flea; 9000mg/L; 48 Hr ED50 Daphnia magna: 48.3 mg/L |

| Ecotoxicity – Freshwater Algae Data |
| Acetaldehyde | 75-07-0 | 120 Hr ED50 Nituschia linesis; 237-249 mg/L |
13. Disposal Considerations

Disposal instructions
Dispose in accordance with all applicable regulations.

14. Transport Information

Department of Transportation (DOT) Requirements
Dispose in accordance with all applicable regulations.

General
Not regulated as dangerous goods.

15. Regulatory Information

Federal Regulations
Product as supplied, is an article under TSCA.

This fiber may have been produced with Carbon Black and/or Titanium Dioxide. These compounds, as present in this material, are not water soluble and are encapsulated in the polymer. They are not extracted or released in normal handling, processing, use and disposal.

NTP(National Toxicology Program) – Report on Carcinogens – Reasonably Anticipated to be Human Carcinogens
Acetaldehyde 75-07-0 Reasonably Anticipated to be a carcinogen

U.S. – CERCLA/SARA – Section 313 – Emission Reporting
Acetaldehyde 75-07-0 0.1 % de minimis concentration

Acetaldehyde 75-07-0 2500 lb TQ

State Regulations

U.S. New Jersey – Right to Know Hazardous Substance List
Acetaldehyde 75-07-0 sn 0001

U.S. – Pennsylvania – RTK(Right to Know) List
Acetaldehyde 75-07-0 Environmental hazard

U.S. – Massachusetts – Right to Know List
Acetaldehyde 75-07-0 Carcinogen; Extraordinarily hazardous

U.S. – California – Proposition 65 – Carcinogens List
Acetaldehyde 75-07-0 Carcinogen, initial date 4/1/88

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard – No
Delayed Hazard – Yes
Fire Hazard – No
Pressure Hazard – No
Reactivity Hazard – No

Section 302 extremely
Hazardous substance
No

International Regulations
As an article the product does not need to be labeled in accordance with ED-directives or respective national laws.

IARC – Group 2B (Possibly Carcinogenic to Humans)
Acetaldehyde 75-07-0 Monograph 71(1999), Supplement 7 (1987), Monograph 36 (1985)
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16. Other Information

HMIS ratings
- Health: 0
- Flammability: 1
- Physical hazard: 0

NFPA ratings
- Health: 0
- Flammability: 1
- Instability: 0

CHANGES TO SDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:
- Corporate name change
- GHS compliance changes to SDS format

Disclaimer
This Safety Data Sheet ("SDS") contains selected information about a specific Durafiber Technologies product or group of products. It relates only to the identified product and any identified uses and is based on information available as of the date hereof. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced.

Information provided herein with respect to any hazards result in any exposure or risk to workers or the general public. THIS SDS WAS PREPARED PURSUANT TO GOVERNMENT REGULATIONS THAT IDENTIFY SPECIFIC TYPES OF INFORMATION TO BE PROVIDED HEREIN. IT IS THEREFORE NOT INTENDED AS, AND DOES NOT CONTAIN, A COMPLETE STATEMENT OF AND DOES NOT CONSTITUTE A REPRESENTATION, WARRANTY OR GUARANTY WITH REGARD TO, A PRODUCT’S CHARACTERISTICS, USES, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR THE SUITABILITY, SAFETY, EFFICACY, HAZARDS OR HEALTH EFFECTS OF THE PRODUCT, WHETHER USED SINGULARLY OR IN COMBINATION WITH ANY OTHER PRODUCT, EXCEPT TO THE EXTENT REQUIRED BY THE RELEVANT LAW AND REGULATIONS. Purchasers and users of the product are responsible for determining that the product is suitable for the intended use and that their workers, and the general public are advised of any risks resulting from such use. Nothing contained in this SDS shall be construed to modify any of the commercial terms pursuant to which the product was sold by Durafiber Technologies including, but not limited to, terms and conditions addressing each party’s respective rights and obligations with regard to warranties, remedies and indemnification.

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This disclaimer shall be effective to the extent allowed by law. Should any provision be deemed to be ineffective or unenforceable, that provision shall be deemed severed from the disclaimer and the remaining provisions shall continue to have full force and effect.

This document has undergone significant changes and should be reviewed in its entirety.

| Issue date | October 2012 |
| Re-issue date | May 2015 |