

Safety Data Sheet for Synthetic Fibers

(according to 91/155/EC)

Revised:
2006-08-18

Performance Fibers High Tenacity (PEN)

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1. Product and Supplier Information

1.1. Fiber Product

1.1.1 Appearance: Filament yarn

1.1.2 Fibertype: Polyester (PES)

1.1.3 Chemical Name: Polyethylene Naphthalate

1.1.4 CAS-No.: 25 853-85-4

1.1.5 Trade Mark or Synonyms: Performance Fibers - Technical Filament

1.2 Company Information

1.2.1 Supplier: **Performance Fibers GmbH, Berliner Straße 1, 36251 Bad Hersfeld**

1.2.2 Information phone no.: **+49 (0)8234-82-1337**

2. Composition/Information about ingredients

2.1 Composition

		<u>%</u>
2.1.1	Polymer	98-99
2.1.2	Other Additives	dyes, where applicable < 3
2.1.3	Other Ingredients	Finish < 1

2.2 Special Ingredients

2.2.1 **Finish**

The fibre product itself is not toxic. It can contain up to 1 % of finish. Consult the manufacturer if the product is to be used for special applications such as in the food industry, or for hygiene, or in the medical or surgical sectors. To date, proper use of this fibre product has not been associated with any detrimental effects on health.

Finish is applied to most fibers and yarns as a processing aid. The finish, spooling oils and sizes can generally be removed in an aqueous medium if so required.

2.2.2 **Solvent**

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None.

3. **Potential Hazards**

The product is neither cancerogenic, mutagenic nor teratogenic.

4. **First Aid**

4.1 **Inhalation**

Inhalation hazards of this product are negligible pending possible imposition of threshold limit values. Therefore no special precautionary measures are necessary.

Inhalation of fiberfly, dust and finish decomposition products should be avoided by hood suction or fresh air ventilation. In case of coughing or other symptoms the person should seek fresh air and - if necessary - see a physician.

4.2 **Eye contact**

In case of eye contact, rinse with plenty of water. In case of persistent irritation see physician.

4.3 **Skin contact**

Wash with soap and water. In case of irritation see physician.

4.4 **Ingestion**

No special measures necessary.

5. **Measures in case of fire**

5.1 **Burning Behavior**

Combustion temperature:	Not applicable
	Product will burn in a fire.
Autoignition temperature:	520 °C DIN 51794
Thermal decomposition:	> 320 °C

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Hazardous Decomposition Products:

Carbonmonoxide, carbondioxide and low-molecular-weight organic compounds depending on temperature and air supply.

Unusual Fire and Explosion Hazards:

Fiber dust and fly could represent a fire hazard at sufficient concentrations. Remove ignition sources. Beware of electrostatic charges.

5.2 Extinguishing Media:

All usual extinguishing media can be used. Do not use water, if fire is caused by an electrical short circuit.

Use self containing breathing apparatus for fire fighting in closed rooms.

6. Spills

In case of accidental spills refer to section 5. "Measures in case of Fire" and section 7 "Handling and Storage". During cleanup use proper personal protection.

7. Handling and Storage

All packages, cartons or bales must be stored in line with applicable procedures and requirements.

8. Limits to Exposure and Personal Safety Measures

8.1 Avoid accumulation fiber fly, dust and finish decomposition products by sufficient air supply and proper house keeping.

8.2 Personal Safety Measures

8.2.1 Eye Protection

Appropriate Safety Measures e.g. while cutting bale or carton straps.

8.2.2 Skin Protection

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Fibers that are processed at high speeds could cause abrasions or cuts. Appropriate protective measures are recommended.

8.2.3 Inhalation

See 4 and 5.

8.3 **Limits to Exposure**

None.

9. **Physical and Chemical Properties**

9.1 **Appearance**

9.1.1 Form: Filament yarn

9.1.2 Color: White or spundyed black

9.1.3 Odor: None

9.2 **Safety Relevant Data**

9.2.1 Specific density : 1,3 - 1,4 g/cm³

9.2.2 Melting Range: 265 - 275 °C

9.2.3 Solubility in Water: not soluble

9.2.4 Solvents: None.

9.2.5 Autoignition temperature:) see 5.1

9.2.6 Decomposition:)

10. **Stability and Reactivity**

10.1 **Chemical Stability:** stable

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10.2 Conditions to avoid

Temperatures above 320°C will decompose the material if oxygen is present (see also 5.1 and 10.4).

10.3 Materials to avoid

Polyester will be decomposed by strong oxidation agents as well as strong acids and caustic.

10.4 Decomposition

Hazardous decomposition products see 5.1.

10.5 Polymerization

Not applicable.

11. Toxicology

See 2.2.1.

12. Ecology

12.1 Ecotoxicological Information

The fiber product is not associated with any ecological problems.

The finish may vaporize or decompose at temperatures above 130 °C.

If subsequent processing involves the use of water, the wastewater should be given the appropriate treatment in a purifying plant, in line with local regulations.

12.2 Ecochemical Information

Under usual soil conditions Polyester is stable and does not decompose.

13. Disposal Information

If recycling is not possible, Polyester can be disposed of in a suitable refuse installation or incinerated subject to local regulations.

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EWC (European Waste Catalogue) code: 070213

14. Transportation

GGVSee/IMDG-Code: UN-Nr. ICAO/IATA-DGR:
GGVE/GGVS: RID/ADR: ADNR:

Other information:

Not a dangerous substance as defined in the above regulations.

15. Regulations

See 14.

16. Other Information

This safety data sheet for synthetic fibers uses the format and listing sequence the EC - Material Safety Data Sheet for chemical compounds and preparations. It is intended to provide information about the physical properties, safety aspects, toxicological data and ecological characteristics which are relevant for the use of synthetic fibers in textile and industrial applications, and to recommend safe procedures for handling, storage and transport. Furthermore, it should also serve to provide industrial users of synthetic fibers with the appropriate information to protect both man and the environment. It was not designed with the private enduser in mind. It is recommended that supplementary information be requested if an unusual application of synthetic fibers is intended.

The information given here is the best available to the author of this document on the date of issue. It does not constitute a contractual description of the product properties.