



**Kevlar® Spun Yarn Blends**

Version 2.0

Revision Date 02/22/2008

Ref. 15000002721

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Kevlar® Spun Yarn Blends  
 Product Grade/Type : Type 970 ZB;Type 970 ES;Type 970 ES with PET;Type 970 ES with Nylon  
 MSDS Number : 15000002721  
 Manufacturer : DuPont  
 1007 Market Street  
 Wilmington, DE 19898

Product Information : 1-800-931-3456  
 Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)  
 Transport Emergency : CHEMTREC: 1-800-424-9300 (outside the U.S. 703-527-3887)

Other information : OSHA Hazard Communication Standard (29 CFR 1910.1200) requirements for Material Safety Data Sheets do not apply to this product. This product is excluded as an article. Information on potential hazards associated with product fabrication and/or installation are discussed in this datasheet.

**SECTION 2. HAZARDS IDENTIFICATION**

Emergency Overview

The hazards of this product are associated mainly with its processing. Processing para-aramid products can release respirable dust and respirable fibre particulate. Prolonged inhalation of respirable dust and respirable fibre particulate at high concentrations can cause lung damage. High concentrations of dust can irritate eyes, nose and respiratory system and cause coughing and sneezing. Continual rubbing of fibre particulates and dust on the skin can cause a transitory, mild irritation with redness or itching.

Potential Health Effects

Carcinogenicity

Material	IARC	NTP	OSHA	ACGIH
Titanium dioxide	2B			

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No.	Concentration
Spun yarn		

Exposure limits may be applicable for the following :

Para-aramid	26125-61-1	
Nylon 66	32131-17-2	
Polyethylene terephthalate	25038-59-9	



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Spandex	9048-58-2	
Steel	65997-19-5	
Titanium dioxide	13463-67-7	

**SECTION 4. FIRST AID MEASURES**

General advice : No hazards which require special first aid measures. If symptoms persist, call a physician. If irritation occurs, flush area thoroughly with water.

**SECTION 5. FIRE-FIGHTING MEASURES**

Flammable Properties

Flash point : not applicable

Thermal decomposition : > 250 °C (> 482 °F)

Fire and Explosion Hazard : Hazardous decomposition products formed under fire conditions.

Extinguishing Media

: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Firefighting Instructions

: Wear self contained breathing apparatus for fire fighting if necessary.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel) : None.

Spill Cleanup : Avoid dust formation. Use approved industrial vacuum cleaner for removal.

Accidental Release Measures : Do not let product enter drains.

**SECTION 7. HANDLING AND STORAGE**

Handling (Personnel)

: Avoid dust formation. Exposure to fibre fly, dust and decomposition products of spinfinishes should be avoided by ventilation and/or vacuum cleaning. Do not touch moving threadlines. Entanglement with this fibre can severely cut or even sever fingers. Avoid breathing dust.

Storage

: Keep away from direct sunlight.



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**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Engineering controls : Ensure adequate ventilation. Recirculated air should be filtered to remove respirable dust. Provide for appropriate exhaust ventilation and dust collection at machinery. Static charges can cause explosions in solvent and dust laden atmospheres. Provide grounding of equipment to prevent static build-up.

Personal protective equipment

Eye protection : Safety glasses with side-shields

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Exposure Guidelines

Exposure Limit Values

Para-aramid

AEL *	(DUPONT)	2 fibers/cm3	8 & 12 hr. TWA	Respirable fibers
AEL *	(DUPONT)	5 mg/m3	8 & 12 hr. TWA	Non-fibrous particulate and/or non-respirable fibres.

Nylon 66

AEL *	(DUPONT)	5 mg/m3	8 hr. TWA	Respirable dust.
AEL *	(DUPONT)	10 mg/m3	8 hr. TWA	Total dust.

Polyethylene terephthalate

AEL *	(DUPONT)	10 mg/m3	8 hr. TWA	Total dust.
AEL *	(DUPONT)	5 mg/m3	8 hr. TWA	Respirable dust.

Titanium dioxide

PEL	(OSHA)	15 mg/m3	8 hr. TWA	Total dust.
TLV	(ACGIH)	10 mg/m3	TWA	
AEL *	(DUPONT)	10 mg/m3	8 & 12 hr. TWA	Total dust.
AEL *	(DUPONT)	5 mg/m3	8 & 12 hr. TWA	Respirable dust.

\* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Form	: yarn
Color	: various
Odor	: odourless
Melting point	: > 225 °C (> 437 °F)
Boiling point/boiling range	: not applicable
Water solubility	: insoluble

**SECTION 10. STABILITY AND REACTIVITY**

Incompatibility	: Strong acids and strong bases
Decomposition	: Decomposition temperature : > 250 °C (> 482 °F)



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Hazardous thermal decomposition products: , Carbon dioxide.  
nitrogen oxides (NOx), Hydrogen cyanide (gaseous), Ammonia.  
Aldehydes, Hydrocarbons.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Para-aramid

Oral ALD : > 7,500 mg/kg, rat

Skin irritation : Species: rabbit, No skin irritation

Skin Sensitization : Patch test on human volunteers did not demonstrate sensitization properties.

Repeated dose toxicity : Inhalation, rat  
lung effects

Carcinogenicity : Animal testing did not show any carcinogenic effects.

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

**SECTION 12. ECOLOGICAL INFORMATION**

Additional ecological information : No data is available on the product itself.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste Disposal : Can be landfilled or incinerated, when in compliance with local regulations.  
Do not flush into surface water or sanitary sewer system.

**SECTION 14. TRANSPORT INFORMATION**

Not classified as dangerous in the meaning of transport regulations.

**SECTION 15. REGULATORY INFORMATION**

TSCA Status : listed or compliant

SARA 313 Regulated Chemical(s) : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.



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**SECTION 16. OTHER INFORMATION**

Restrictions for use : Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative. You may also request a copy of the DuPont POLICY Regarding Medical Applications H-50103-3 and DuPont CAUTION Regarding Medical Applications H-50102-3.

It is recommended that additional information be requested if an unusual application of synthetic fibres is intended.

Contact person : MSDS Coordinator, 1007 Market St. Wilmington, DE 19898, Phone: 302-773-0904 (for MSDS information)/804-383-4015 (for technical information)

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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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