

# Material Safety Data Sheet



## **KEVLAR® Para-aramid**

Version 2.0

Revision Date 12/02/2010

Ref. 150000002634

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

### **SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name	:	KEVLAR® Para-aramid
Product Grade/Type	:	Yarn, Staple, Floc, Fabric
MSDS Number	:	150000002634
Manufacturer	:	E.I. du Pont Canada Company P.O. Box 2200, Streetsville Mississauga, ON L5M 2H3 Canada
Product Information	:	1-800-387-2122
Medical Emergency	:	1-800-441-3637 (24 hours)

### **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. Dust may form explosive mixture in air. 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

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

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

Component	CAS-No.	Concentration
Para-aramid fiber		100 %

Exposure limits may be applicable for the following :

Para-aramid	26125-61-1	
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### **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 : > 300 °C (> 572 °F)

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

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

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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. Clean up dusts and fibres with high efficiency particulate air (HEPA) filtered vacuum equipment, or by wet cleaning.

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 spinnings 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.

### **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

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atmospheres. Provide grounding of equipment to prevent static build-up.

### Personal protective equipment

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

Eye protection : Safety glasses with side-shields

### Exposure Guidelines

#### Exposure Limit Values

##### Para-aramid

AEL \* (DUPONT) 2fibers/cm3 8 & 12 hr. TWA Respirable fibers.

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

\* 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 : Nonwoven fabric, woven fabric, fibres, yarn  
Color : gold  
Odor : odourless  
Melting point/range : not applicable  
Boiling point/boiling range : not applicable  
Specific Gravity : 1.44 - 1.45 at 20 °C (68 °F)  
Water solubility : insoluble

## **SECTION 10. STABILITY AND REACTIVITY**



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Incompatibility : Strong acids and strong bases

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

### **SECTION 11. TOXICOLOGICAL INFORMATION**

KEVLAR® Para-aramid

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

Further information : Effects of breathing high concentration of respirable particles may include: Risk of serious damage to the lungs (by inhalation).

Para-aramid

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

Skin irritation : No skin irritation, rabbit non-irritant

Eye irritation : non-irritant

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**

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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**

DSL Status : On the inventory, or in compliance with the inventory

WHMIS Classification : - Not WHMIS controlled.

### **SECTION 16. OTHER INFORMATION**

MSDS preparation date : 12/02/2010

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,



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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.  
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