



KEVLAR® Para-aramid

Version 2.2

Revision Date 08/20/2008

Ref. 150000002634

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® Para-aramid
 Product Grade/Type : Yarn, Staple, Floc, Fabric
 Tradename/Synonym : formerly MSDS# SP1889

MSDS Number : 150000002634
 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. 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.

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 | |
|-------------|------------|--|

SECTION 4. FIRST AID MEASURES



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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.

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. 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 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.

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



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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.

* 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

Incompatibility : Strong acids and strong bases
Decomposition : Decomposition temperature : > 300 °C (> 572 °F)
Hazardous thermal decomposition products: , Carbon dioxide.
nitrogen oxides (NOx), Hydrogen cyanide (gaseous), Ammonia.
Aldehydes, Hydrocarbons.

SECTION 11. TOXICOLOGICAL INFORMATION

KEVLAR® Para-aramid
Skin sensitization : Patch test on human volunteers did not demonstrate sensitization properties.
Para-aramid
Oral ALD : > 7,500 mg/kg, rat
Skin irritation : Species: rabbit, No skin irritation non-irritant
Eye irritation : non-irritant
Repeated dose toxicity : Inhalation, rat lung effects



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- 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

- Aquatic Toxicity
Para-aramid : This product has no known eco-toxicological effects.
- 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.
- California Prop. 65 : Chemicals known to State of California to cause cancer, birth defects or any other harm: none known

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.



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

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