

Material Safety Data Sheet

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NOMEX® Meta-aramid

Version 2.1

Revision Date 08/20/2008

Ref. 150000002643

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 : NOMEX® Meta-aramid
- Product Grade/Type : Yarn, Staple, Fabric, Floc, Tow
- Tradename/Synonym : formerly MSDS# SP6001

- MSDS Number : 150000002643
- 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. Dust may form explosive mixture in air. High concentrations of dust can irritate eyes, nose and respiratory system and cause coughing and sneezing. Processing meta-aramid products can release Dimethyl Acetamide (DMAC). Hazards related to DMAC include: May be harmful by inhalation (after often repeated exposure). May be harmful in contact with skin (after often repeated exposure). Liver and kidney injuries may occur. 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. 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
Meta-aramid fiber or meta-aramid fiber blended with para-aramid, antistatic or other synthetic fibers		100 %

Exposure limits may be applicable for the following :

Meta-aramid	25765-47-3	
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Para-aramid	26125-61-1	
Synthetic fibres		
N,N-Dimethylacetamide	127-19-5	

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.

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. Do not touch moving threadlines. Entanglement with this fibre can severely cut or even sever fingers. Avoid breathing dust or vapor.

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

Meta-aramid

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

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.

N,N-Dimethylacetamide

PEL (OSHA) 10 ppm 35 mg/m3 8 hr. TWA
Skin designation applies.
Skin designation applies.

TLV (ACGIH) 10 ppm TWA
AEL * (DUPONT) 10 ppm 8 & 12 hr. TWA, Skin

* 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 : white, pigmented
Odor : none
Melting point/range : not applicable
Specific Gravity : 1.38
Water solubility : insoluble

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Temperature > 200 °C (> 392 °F)
Heating can release hazardous gases.
Incompatibility : Strong acids and strong bases
Decomposition : Decomposition temperature : > 300 °C (> 572 °F)

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Hazardous decomposition products Carbon monoxide, nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid).

SECTION 11. TOXICOLOGICAL INFORMATION

Skin sensitization	:	Did not cause sensitization on laboratory animals. Negative in human patch test.
Meta-aramid		
Oral ALD	:	> 11,000 mg/kg, rat
Inhalation ALC	:	> 238 mg/m ³ , rat lung effects
Skin irritation	:	non-irritant
Carcinogenicity	:	Did not show carcinogenic effects in animal experiments.
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
Carcinogenicity	:	Animal testing did not show any carcinogenic effects.
Mutagenicity	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
N,N-Dimethylacetamide		
Dermal LD50	:	2,240 - 9,600 mg/kg, animals (unspecified species)
Oral LD50	:	3,000 - 6,000 mg/kg, rat
Inhalation 1 h LC50	:	8.81 mg/l female, rat Value applicable only if respirable particles are formed.
Inhalation 4 h LC50	:	2.2 mg/l female, rat
Skin irritation	:	Species: rabbit Mild skin irritation
Eye irritation	:	Species: rabbit

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		irritant
Repeated dose toxicity	:	Dermal Central nervous system depression, Liver effects, Skin effects
		Oral Pathologic changes, Stomach, Testes, Liver, Kidney, Abnormal decrease in number of red blood cells (anaemia)
		Inhalation Kidney effects, Liver effects, Retinal damage
Carcinogenicity	:	Did not show carcinogenic effects in animal experiments.
Mutagenicity	:	Did not cause genetic damage in cultured bacterial cells., Did not cause genetic damage in cultured mammalian cells., Evidence suggests this substance does not cause genetic damage in animals.
Toxicity to reproduction	:	Animal testing showed no reproductive toxicity.
Teratogenicity	:	Animal testing showed effects on embryo-foetal development at levels equal to or above those causing maternal toxicity.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity Para-aramid	:	This product has no known eco-toxicological effects.
N,N-Dimethylacetamide 96 h LC50	:	Fathead minnow 1,500 mg/l

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 : Product is an article as defined at 40CFR720.3(c) and is not subject to TSCA Inventory requirements.

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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.

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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