

**MATERIAL SAFETY DATA SHEET**

This MSDS complies with 29 CFR 1910.1200

**SECTION 1 - PRODUCT IDENTIFICATION**

**PRODUCT** All styles of aramid fabric  
**FINISH** A514, A514B, A514C, A514D, A833  
**DESCRIPTION** Laminated textile product

**SECTION 2 - HAZARDOUS INGREDIENTS**

CHEMICAL OR COMMON NAME	CAS#	Max. Weight %	ACGIH TLV	OSHA PEL
Phenol formaldehyde resin	9003-35-4	< 5	None Established	None Established
Polyvinyl butyral	27360-07-2	< 6	10 mg/m <sup>3</sup> , 8 hr, TWA (total dust) 3 mg/m <sup>3</sup> , 8 hr, TWA (respirable)	15 mg/m <sup>3</sup> , 8 hr, TWA (total dust) 5 mg/m <sup>3</sup> , 8 hr, TWA (respirable)
Phenol	108-95-2	< 0.5	5 ppm, 8 hr	5 ppm, 10 hr 15 ppm, 15 min
Formaldehyde	50-00-0	< 0.1	1 ppm, 8 hr 0.3 ppm ceiling	0.75 ppm, 8 hr, TWA 2 ppm, 15 min, STEL
Ethanol	64-17-5	< 1	1000 ppm TWA	1000 ppm, TWA

**SECTION 3 - OTHER INGREDIENTS**

ITEMS LISTED IN THIS SECTION ARE EITHER CHEMICALLY OR PHYSICALLY BONDED TO THE FIBROUS GLASS TEXTILE AND ARE DEEMED NON-HAZARDOUS IN THE STATE SUPPLIED.

CHEMICAL AND COMMON NAME	MAX. % BY WEIGHT
Para-aramid fiber	95.0
Textile sizing and lubricants	3.5

#### SECTION 4 - PHYSICAL DATA

**SPECIFIC GRAVITY:** NA

**APPEARANCE/PHYSICAL STATE:** Yellow; solid

**SOLUBILITY IN WATER:** Negligible

**ODOR:** No distinctive odor

#### SECTION 5 - FIRE HAZARD DATA

**FLASH POINT:** Not applicable

**FLAMMABLE LIMITS:** Not applicable

**THERMAL DECOMPOSITION:** >300°C(>572°F)

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

**SPECIAL FIRE FIGHTING PROCEDURE:** In any sustained fire, wear self-contained breathing apparatus.

**UNUSUAL FIRE HAZARDS:** Hazardous decomposition products formed under fire conditions.

#### SECTION 6 – STABILITY AND REACTIVITY DATA

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS/MATERIALS TO AVOID:** Strong acids and strong bases

**HAZARDOUS DECOMPOSITION PRODUCTS:** None generated under normal storage or handling conditions.

Decomposition temperature is >300°C (>572°F). Hazardous thermal decomposition products include Carbon dioxide, nitrogen oxides (NO<sub>x</sub>), Hydrogen cyanide (gaseous), Ammonia, Aldehydes, and Hydrocarbons.

#### SECTION 7 - HEALTH HAZARD DATA

**POTENTIAL ROUTES OF ENTRY:** Inhalation, skin contact

**EFFECTS OF OVEREXPOSURE:** Direct skin contact with aramid as dust may cause mechanical irritation and transitory dermatitis. Breathing of fibers or dust may cause mechanical irritation of the mouth, nose, and throat.

#### EMERGENCY AND FIRST AID PROCEDURE:

Inhalation: Move to fresh air area.

Ingestion: Not likely to occur through normal use, should ingestion occur seek medical attention.

Eyes: Flush with flowing water for 15 minutes - seek medical attention

Skin: Flush with ample cool water followed by washing with mild soap to remove accumulated fibers.

**CARCINOGEN:** 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 8 - SPECIAL PROTECTION REQUIRED

Exposure to fibrous materials may cause mechanical irritation to the skin, eyes, nose and throat. Typically such irritation occurs to newly exposed individuals, and usually diminishes after several days of exposure.

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

**VENTILATION:** Normal area ventilation is sufficient in most cases to keep dust and fiber levels below the TLV or PEL.

**SKIN:** Not normally required.

**EYE:** Not normally required, but as a good safety work practice, suggest the wearing of appropriate eye protection such as safety glasses/side shields or equivalent whenever use of the product releases airborne fibrous materials.

**OTHER:** Observe good personal hygiene.

### Exposure Guidelines

#### Exposure Limit Values

##### Para-aramid

AEL* (DuPont)	2 fibers/cm <sup>3</sup>	8 & 12 hr. TWA	Respirable fibers
AEL* (DuPont)	5 mg/m <sup>3</sup>	8 & 12 hr. TWA	Non-fibrous particulate and/or non-respirable fibers.

\*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 – 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)

**\*Based on DuPont's data**

## SECTION 9 - CONTAINMENT AND DISPOSAL

**CONTAINMENT AND CLEAN UP:** Dust or loose fibers can be vacuumed or swept with the aid of a dust suppressant.

**DISPOSAL:** Can be landfilled or incinerated, when in compliance with local, state, and federal regulations. This material is not regulated under RCRA hazardous waste regulations.

## SECTION 10 - SPECIAL PRECAUTIONS

**SHIPPING:** Not regulated by DOT; not classified by TDG

**STORAGE:** Store in dry area. Keep away from direct sunlight.

## SECTION 11 - REGULATORY INFORMATION

**EPA, RCRA 40 CFR, Part 261, 1990:** Non-hazardous

**CERCLA:** Not listed

**SARA TITLE III:** Exempt by definition

**PA RIGHT-TO-KNOW:** Not subject to reporting

**TSCA INVENTORY:** Reported/Included

**CA PROPOSITION 65:** Not listed

**NJ RIGHT-TO-KNOW:** Not subject to reporting

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**Technical/Emergency Information:** (336) 545-0011

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