

DUPONT

-- NOMEX BRAND FIBER

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MSDS Safety Information
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FSC: 5970
NIIN: 01-125-0526
MSDS Date: 12/16/1999
MSDS Num: CKSQZ
Product ID: NOMEX BRAND FIBER

MFN: 01
Responsible Party
Cage: T0822
Name: DUPONT
Address: 1007 MARKET STREET
City: WILMINGTON DE 19898
Info Phone Number: 1-800-441-3637; 800-453-8527
Emergency Phone Number: 800-424-9300
Resp. Party Other MSDS No.: SP6001
Preparer's Name: EDMUND MERRIMAN
Chemtrec IND/Phone: (800)424-9300
Published: Y

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Contractor Summary
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Cage: T0822
Name: DUPONT
Address: 1007 MARKET STREET
City: WILMINGTON DE 19898
Phone: 1-800-441-3637; 800-453-8527
Cage: T0979
Name: DUPONT ADVANCED FIBERS SYSTEMS
Box: 27001
City: RICHMOND VA 23261
Phone: 800-453-8527

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Item Description Information
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Item Manager: S9G
Item Name: INSULATION SHEET,ELECTRICAL
Specification Number: MIL-I-24202
Type/Grade/Class: S FORM,2 TYPE
Unit of Issue: SY
UI Container Qty: 0
Type of Container: ROLL

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Ingredients
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Cas: 25765-47-3
Name: POLY(ISOPHTHALOYLCHLORIDE/M-PHENYLENEDIAMINE) (NOMEX META-ARAMIDE POLYMER)
% low Wt: 73.
% high Wt: 99.5

Cas: 26125-61-1
Name: POLY(TEREPHTHALOYLCHLORIDE/P-PHENYLENEDIAMINE) (KEVLAR BRAND PARA-ARAMID
POLYMER)
% low Wt: 0.
% high Wt: 60.

Cas: 127-19-5
DTSC #. 107700000

RTECS #: AB7700000
Name: N,N-DIMETHYLACETAMIDE (DMAC)
< Wt: 3.
OSHA PEL: 35 MG/M3;10 PPM
ACGIH TLV: 36 MG/M3;10 PPM
ACGIH STEL: NOT ESTABLISHED

Name: POLYAMID FIBER (NYLON)
Percent by Wt: 2.

Cas: 1333-86-4
RTECS #: FF5800000
Name: CARBON BLACK
< Wt: .5
OSHA PEL: 3.5 MG/M3
ACGIH TLV: 3.5 MG/M3
ACGIH STEL: NOT ESTABLISHED

Name: POLYETHYLENE
% Wt: TRACE

Name: FINISH
% low Wt: 0.
% high Wt: 2.

Name: COLORANTS
% low Wt: 0.
% high Wt: 4.

Name: DYE ASSIST AGENT
% low Wt: 0.
% high Wt: 14.

Name: ULTAVIOLET LIGHT STABILIZER
% low Wt: 0.
% high Wt: 4.

Cas: 7732-18-5
RTECS #: ZC0110000
Name: WATER
% low Wt: 0.
% high Wt: 12.

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Health Hazards Data
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Carcinogenicity Inds - NTP: NO
IARC: NO
OSHA: NO

Effects of Exposure: EYE: FIBER FLY AND DUST MAY CAUSE SLIGHT MECHANICAL IRRITATION. NOMEX AND KEVLAR ARE UNTESTED FOR EYE IRRITANCY. SKIN: NEITHER NOMEX OR KEVLAR CAUSE SENSITIZATION (ALLERGIC REACTION) AND HAVE LITTLE POTENTIAL FOR SKIN IRRITATION. CONTINUAL RUBBING OF FIBERS OR FIBER PIECES ON THE SKIN MAY CAUSE SKIN IRRITATION. INGESTION: NOMEX AND KEVLAR ARE NONTOXIC WHEN EATEN. INHALATION: NOMEX AND KEVLAR FIBERS ARE TOO BIG TO INHALE INTO THE LUNGS, BUT FIBER DUST AND FLY FROM PROCESSING MAY BE BREATHED INTO THE NOSE AND THROAT. WORKING UNPROTECTED IN DUSTY CONDITIONS MAY CAUSE UPPER RESPIRATORY IRRITATION AND COLD-LIKE SYMPTOMS.

Explanation Of Carcinogenicity: NONE OF THE COMPONENTS PRESENT IN THIS MATERIAL AT CONCENTRATIONS EQUAL TO OR GREATER THAN 0.1% ARE LISTED BY IARC, NTP, OSHA, ACGIH AS A CARCINOGEN. CARBON BLACK IS LISTED BY IARC AS 2B-POSSIBLE

HUMAN CARCINOGEN.

Signs And Symptoms Of Overexposure: EYE/SKIN: IRRITATION. INHALATION: UPPER RESPIRATORY IRRITATION OR COLD-LIKE SYMPTOMS.

First Aid: INHALATION: IF LARGE AMOUNTS OF FUMES, DUST OR FIBERS ARE INHALED, REMOVE TO FRESH AIR. IF PERSISTENT COUGH OR OTHER SYMPTOMS DEVELOP, GET MEDICAL ATTENTION. IF EXPOSED TO EXCESSIVE LEVELS OF DMAC, REMOVE TO FRESH AIR AND GET MEDICAL ATTENTION. SKIN: WASH WITH SOAP AND WATER. WASH CONTAMINATED CLOTHING/.GLOVES BEFORE REUSE. USE HAND CREAMS TO SOOTHE AND MOISTEN IRRITATED SKIN. GET MEDICAL ATTENTION IF IRRITATION PERSISTS AFTER CONTACT STOPS. INGESTION: NOT A PROBABLE ROUTE. HOWEVER, IN CASE OF GASTRO-INTESTINAL DISTRESS FOLLOWING ACCIDENTAL INGESTION, CALL A PHYSICIAN.

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Handling and Disposal
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Spill Release Procedures: USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. WASH, SHOVEL OR MOP UP FIBERS AND PLACE IN SOLID WASTE CONTAINERS. AVOID THE USE OF DRY SWEEPING OR AIR JET BLOWING OF FIBERS AND DUST; THESE CAN RE-SUSPEND RESPIRABLE DUST IN THE AIR. CLEAN UP DUSTS CONTAINING KEVLAR FIBERS WITH HIGH EFFICIENCY PARTICULATE AIR (HEPA) FILTERED VACUUM EQUIPMENT, BY WIPING OR BY WET CLEANING.

Waste Disposal Methods: WASTE MATERIALS OF NOMEX AND KEVLAR MAY BE TREATED, STORED, TRANSPORTED AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS GOVERNING THE DISPOSAL OR OTHER COMMON AND NON-RCRA REGULATED WASTE MATERIALS.

Handling And Storage Precautions: DO NOT TOUCH MOVING THREADLINES OF NOMEX/KEVLAR. ENTANGLEMENT WITH THIS HIGH STRENGTH YARN CAN SEVERELY CUT, OR EVEN SEVER FINGERS. NOMEX/KEVLAR ARE DEGRADED BY ULTRA-VIOLET LIGHT. DO NOT STORE IN DIRECT SUNLIGHT. FLUORESCENT LIGHTING WILL CAUSE DISCOLORATION, BUT WILL NOT AFFECT FIBER PROPERTIES.

Other Precautions: USE ONLY WITH ADEQUATE VENTILATION. AVOID DUST GENERATION. DO NOT CONSUME FOOD, DRINK, OR OTHER TOBACCO IN AREAS WHERE THEY MAY BECOME CONTAMINATED WITH THIS MATERIAL.

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Fire and Explosion Hazard Information
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Autoignition Temp Text: N/A

Extinguishing Media: USE WATER, FOAM, CARBON DIOXIDE (CO2) OR DRY CHEMICAL.

Fire Fighting Procedures: KEEP PERSONNEL REMOVED AND UPWIND OF FIRE. WEAR SELF-CONTAINED BREATHING APPARATUS. WEAR FULL PROTECTIVE EQUIPMENT (FULL BUNKER GEAR.)

Unusual Fire/Explosion Hazard: NOMEX & KEVLAR FIBER DUSTS ARE NOT AN EXPLOSION HAZARD. BURNING NOMEX & KEVLAR PRODUCE HAZARDOUS GASES SIMILAR TO THOSE FROM WOOL; MOSTLY CARBON MONOXIDE, CARBON DIOXIDE, NITROGEN OXIDES & SMALL AMOUNTS OF HYDROGEN CYANIDE, AMMONIA, ALDEHYDES, ALIPHATIC HYDROCARBONS & OTHER TOXIC GASES DEPENDING ON BURN CONDITIONS.

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Control Measures
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Respiratory Protection: WHERE AIR BORNE DUST AND FIBRIL CONCENTRATIONS ARE EXPECTED TO EXCEED APPLICABLE EXPOSURE LIMITS, OR WHERE THERE IS POTENTIAL FOR IRRITATION OF NASAL PASSAGES BY THE MECHANICAL ACTION OF THE FIBERS, NIOSH-APPROVED RESPIRATORS SHOULD BE USED. AN AIR-PURIFYING RESPIRATOR WITH DUST/MIST/FUME CARTRIDGE OR CANISTER MAY BE PERMISSIBLE UNDER CERTAIN CIRCUMSTANCES.

Ventilation: IF FUMES/FIBER FLY/DUST ARE GENERATED, USE ENGINEERING CONTROLS WHENEVER NECESSARY TO CONTROL EXPOSURES BELOW APPLICABLE LIMITS.

Protective Gloves: NONE REQUIRED.

Eye Protection: SAFETY GLASSES WITH SIDE SHIELDS

Other Protective Equipment: ISOLATION, ENCLOSURES, EXHAUSTS, VENTILATION, WETTING AND DUST COLLECTION SYSTEMS MAY BE USED.

Work Hygienic Practices: DO NOT CONSUME FOOD, DRINK, OR OTHER TOBACCO IN AREAS WHERE THEY MAY BECOME CONTAMINATED WITH THIS MATERIAL.

Supplemental Safety and Health: *DISPOSABLE DUST MASKS (3M MODEL N95 8210, OR EQUIVALENT) MAY ALSO BE USED. WHEN NOMEX IS USED AT ELEVATED TEMPERATURES, OR IN A WAY THAT MIGHT CREATE AIRBORNE DMAC OR DECOMPOSITION PRODUCTS IN EXCESS OF APPLICABLE EXPOSURE LIMITS, WEAR NIOSH-APPROVED ORGANIC VAPOR CARTRIDGE RESPIRATORS.

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Physical/Chemical Properties
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HCC: N1

M.P/F.P Text: DOES NOT MELT.

Decomp Temp: =200.C, 392.F

Spec Gravity: 1.38G/CC

Solubility in Water: INSOLUBLE

Appearance and Odor: MILD ODOR. NATURAL IS CREAMY WHITE. PRODUCED IN VARIETY OF COLORS. SOLID YARN.

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Reactivity Data
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Stability Indicator: YES

Stability Condition To Avoid: STABLE AT NORMAL TEMPERATURES AND STORAGE CONDITIONS.

Materials To Avoid: NONE ARE REASONABLY FORESEEABLE

Hazardous Decomposition Products: DECOMPOSITION CAN PRODUCE IRRITATING AND TOXIC GASES.

Hazardous Polymerization Indicator: NO

Conditions To Avoid Polymerization: POLYMERIZATION WILL NOT OCCUR.

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Toxicological Information
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Toxicological Information: EYES: NOMEX & KEVLAR ARE UNTESTED FOR EYE IRRITANCY. AS WITH OTHER PARTICLES, MECHANICAL ACTION OF FIBERS IN THE EYE MAY CAUSE SLIGHT IRRITATION. DMAC IS AN EYE IRRITANT IN ANIMALS & MAN. EYE CONTACT MAY INCLUDE EYE IRRITATION WITH DISCOMFORT, TEARING OR BLURRING OF VISION. SKIN: NOMEX & KEVLAR ARE NOT SKIN IRRITANTS OR SKIN SENSITIZERS IN ANIMALS. ACUTE ORAL EFFECTS: NOMEX & KEVLAR HAVE VERY LOW TOXICITY BY INGESTION. ORAL ALD > 7500 MG/KG IN RATS. INHALATION: INDUSTRIAL EXPERIENCE SHOWS THAT INHALATION OF FIBERS MAY CAUSE MECHANICAL IRRITATION OF THE MUCOUS MEMBRANES OF THE NOSE & THROAT.

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Ecological Information
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Ecological: NOMEX & KEVLAR ARE ESSENTIALLY NON-BIODEGRADABLE IN THE ENVIRONMENT AND DO NOT LEACH MATERIAL TOXIC TO FLORA OR FAUNA. FINISHES & ADDITIVES WITH NOMEX ARE ROUTINELY TESTED FOR THEIR POTENTIAL EFFECTS ON MANUFACTURING WASTEWATER TREATMENT SYSTEMS. BIOCOMPATIBILITY & AQUATIC TOXICITY TESTS SHOW: NONE APPEAR TO BE INHIBITORY OR TOXIC TO MICROBES COMMONLY FOUND IN BIOLOGICAL TREATMENT SYSTEMS; BIODEGRADATION & NORMAL ANTI-FOAM TREATMENTS CONTROL FOAMING; DISCHARGE OF SCOURED FINISHES SHOULD NOT RESULT IN INCREASED EFFLUENT TOXICITIES. FINISHES ARE COMPLETELY OR SUBSTANTIALLY BIODEGRADABLE.

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MSDS Transport Information
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Transport Information: NOT REGULATED.

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Regulatory Information
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Sara Title III Information: SECTION 313: NOMEX CONTAINS NO SECTION 313

REPORTABLE CHEMICALS. CERCLA; NOMEX IS NOT REGULATED AS HAZARDOUS WASTE UNDER CERCLA.

Federal Regulatory Information: TSCAL NOMEX FIBER PRODUCTS ARE LISTED ON THE TSCA INVENTORY.

OSHA: THIS MSDS IS PROVIDED TO COMPLY WITH THE PROVISIONS OF THE HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200). CLEAN AIR ACT AMENDMENT S OF 1990: NOOMEX ARAMID FIBER PRODUCTS AND THEIR PACKAGING DO NOT CONTAIN NOR ARE ATHEY MANUFACTURED WITH ANY OZONE-DEPLETING SUBSTANCES LISTED AS A CLASS I (CHLOROFLUOROCARBONS, HALONS, CARBON TETRA TCHLORIDE & METHYL CHLOROFORM) OR CLASS II (HYDROCHLOROFLUOROCARBONS) OF THE CLEAN AIR ACT AMENDMENT S OF 1990.

State Regulatory Information: CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (PROPOSITION 65).: NOMEX CONTAINS NONE OF THE SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR REPRODUCTIVE TOXICITY. PEN NSYLVANIA AND NEW JERSEY RIGHT-TO-KNOW LAWS: NOMEX IS CONSIDERED AN "ARTICLE" AND IS NOT SUBJECT TO THE PROVISIONS OF THE PENNSYLVANIA AND NEW JERSEY RIGHT-TO-KNOW LAWS.

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Other Information

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Other Information: CANADA: THIS MATERIAL IS NOT W CONTROLLED. THIS MATERIAL IS NOT TDG REGULATED. NFPA RATINGS: HEALTH-0, FLAMMABILITY-1, REACTIVITY-0. NPCA- RATINGS: HEALTH-0*, FLAMMABILITY-1, REACTIVITY-0. *CH RONIC HEALTH EFFECTS.

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Transportation Information

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Responsible Party Cage: TO822
Trans ID NO: 154533
Product ID: NOMEX BRAND FIBER
MSDS Prepared Date: 12/16/1999
Review Date: 08/28/2000
MFN: 1
Net Unit Weight: UNKNOWN
Multiple KIT Number: 0
Unit Of Issue: SY
Container QTY: 0
Type Of Container: ROLL
Additional Data: NOT REGULATED PER MSDS.

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Detail DOT Information

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DOT PSN Code: ZZZ
DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION

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Detail IMO Information

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IMO PSN Code: ZZZ
IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION

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Detail IATA Information

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IATA PSN Code: ZZZ
IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION

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Detail AFI Information

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AFI PSN Code: ZZZ
AFI Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
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HAZCOM Label

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Product ID: NOMEX BRAND FIBER
Cage: T0822
Assigned IND: Y
Company Name: DUPONT
Street: 1007 MARKET STREET
City: WILMINGTON DE
Zipcode: 19898
Health Emergency Phone: 800-424-9300
Label Required IND: Y
Date Of Label Review: 08/28/2000
Status Code: A
Origination Code: F
Eye Protection IND: YES
Skin Protection IND: YES
Signal Word: CAUTION
Respiratory Protection IND: YES
Health Hazard: Slight
Contact Hazard: Slight
Fire Hazard: None
Reactivity Hazard: None

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