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02/16/2006

****** SECTION 1 - Product and Company Identification ******

Manufacturer: E.I. DuPont de Nemours & Co.
Fluoroproducts
Wilmington, DE, 19898

Telephone: Product Information: (800) 441-7515
Medical Emergency: (800) 441-3637
Transportation Emergency: (800) 424-9300 (CHEMTREC)

PRODUCT NAME: MIDCOAT BLACK

PRODUCT CODE: 456N-41250 060130

Chemical Family: No Information Available

****** SECTION 2 - Composition, Information on Ingredients ******

CAS #	Ingredient	Concentration/ Range (%)	Exposure Limits**
1333-86-4	CARBON BLACK	1.0	A 3.5 mg/m3 O 3.5 mg/m3 D 0.5 mg/m3 8 & 12 hour TWA
112-34-5	ETHANOL, 2-(2-BUTOXYETHOXY)-	1	D 5.0 ppm A None O None
102-71-6	TRIETHANOLAMINE		A None O None
60828-78-6	POLYETHYLENE GLYCOL TRIMETHYLNONYLETHER		A None O None
60828-78-6	POLYETHYLENE GLYCOL TRIMETHYLNONYL ETHER		A None O None
9002-84-0	POLYTETRAFLUOROETHYLENE		O 15.0 mg/m3 Total Dust PNOR O 5.0 mg/m3 Respirable Dust PNOR D 10.0 mg/m3 Total Dust D 5.0 mg/m3

****** SECTION 2 - Composition, Information on Ingredients ******
Cont'd

					Respirable Dust
				A	None
26655-00-5	PERFLUOROALKOXY RESIN			A	None
				O	None
7732-18-5	WATER			A	None
				O	None
Not Avail	ACRYLIC POLYMER			A	None
				O	None
1344-28-1	ALUMINUM OXIDE		6	A	10.0 mg/m3
				O	15.0 mg/m3
					Total Dust
				O	5.0 mg/m3
					Respirable Dust

OSHA HAZARDOUS? Yes

** A = ACGIH, O = OSHA, D = Dupont, S = Supplier (For additional definition of terms, see Section 16). Limits are 8-hour TWA unless otherwise specified.

****** SECTION 3 - Hazards Information ******

Emergency Overview:
WARNING! VAPORS AND SPRAY MIST HARMFUL IF INHALED. MAY CAUSE NOSE, THROAT, EYE AND SKIN IRRITATION.

Potential Health Effects:
Inhalation:
May cause nose and throat irritation.
Ingestion:
May result in gastrointestinal distress.
Skin or eye contact:
May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Other Potential Health Effects in addition to those listed above:

CARBON BLACK
Is an IARC, NTP or OSHA carcinogen.
Has shown carcinogenic activity in laboratory animals at high doses.
Significance to man is unknown.
The following medical conditions may be aggravated by exposure:
asthma respiratory disease
WARNING: This chemical is known to the State of California to cause

****** SECTION 3 - Hazards Information ******
Cont'd

cancer.

ETHANOL, 2-(2-BUTOXYETHOXY)-
Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system eyes kidneys liver skin
Tests in laboratory animals have shown effects on any of the following organs/systems: blood kidneys liver
Recurrent overexposure may result in liver and kidney injury.
High doses in laboratory animals have shown non specific effects such as irritation, weight loss, moderate blood changes.
Eye contact may cause any of the following: severe irritation burns corneal injury

TRIETHANOLAMINE
Can be absorbed through the skin in harmful amounts.
Recurrent overexposure may result in liver and kidney injury.
Liquid splashes in the eye may result in chemical burns.

POLYETHYLENE GLYCOL TRIMETHYLNONYL ETHER
Eye contact may cause any of the following: severe irritation corneal injury

POLYTETRAFLUOROETHYLENE
Inhalation of fluoropolymer dust may cause irritation of the nose, throat and lungs with cough, difficulty breathing or shortness of breath. Inhalation of fumes (fine particulates) and gases produced from overheated fluoropolymer may result in delayed or immediate respiratory effects. The severity of these effects depends on the extent of overheating and the quantity inhaled. Mild exposure may result in polymer fume fever, a temporary (24-48 hrs) flu-like condition characterized by fever, chills, and/or cough. These symptoms are not immediate and typically occur after a delay of approximately 4-24 hours following exposure. However, exposure to decomposition products (fume and fluorinated gases) from fluoropolymer heated to temperatures above the typical processing temperature, especially in poorly ventilated or confined spaces, may cause extensive and potentially life-threatening lung damage. These decomposition products may produce progressive breathing difficulty and later develop into severe pulmonary edema. Edema may be delayed and unlike polymer fume fever, requires medical intervention.
Do not exceed recommended baking temperatures. Baking ovens must be properly ventilated. At temperatures above 400 C (750 F), small amounts of hydrogen fluoride can be evolved; amounts increase as temperatures increase. Hydrogen fluoride is toxic and can cause skin and eye irritation. (3ppm - ceiling ACGIH-TLV). High concentrations can cause lung damage, pulmonary edema, burns. Some vegetation is particularly sensitive to damage by hydrogen fluoride and attention must be given to exhaust ventilation. Explosive reaction may occur

****** SECTION 3 - Hazards Information ******
Cont'd

above 800 degrees F with finely divided fluorocarbon and metal powder (aluminum or magnesium). Operations such as grinding, buffing or grit blasting may generate such mixtures. Avoid any dust buildup with fluorocarbons and metal mixtures.
WARNING: This chemical contains Tetrafluoroethylene which is known to the State of California to cause cancer.

PERFLUOROALKOXY RESIN
Inhalation of fluoropolymer dust may cause irritation of the nose, throat and lungs with cough, difficulty breathing or shortness of breath. Inhalation of fumes (fine particulates) and gases produced from overheated fluoropolymer may result in delayed or immediate respiratory effects. The severity of these effects depends on the extent of overheating and the quantity inhaled. Mild exposure may result in polymer fume fever, a temporary (24-48 hrs) flu-like condition characterized by fever, chills, and/or cough. These symptoms are not immediate and typically occur after a delay of approximately 4-24 hours following exposure. However, exposure to decomposition products (fume and fluorinated gases) from fluoropolymer heated to temperatures above the typical processing temperature, especially in poorly ventilated or confined spaces, may cause extensive and potentially life-threatening lung damage. These decomposition products may produce progressive breathing difficulty and later develop into severe pulmonary edema. Edema may be delayed and unlike polymer fume fever, requires medical intervention.
Do not exceed recommended baking temperatures. Baking ovens must be properly ventilated. At temperatures above 400 C (750 F), small amounts of hydrogen fluoride can be evolved; amounts increase as temperatures increase. Hydrogen fluoride is toxic and can cause skin and eye irritation. (3ppm - ceiling ACGIH-TLV). High concentrations can cause lung damage, pulmonary edema, burns. Some vegetation is particularly sensitive to damage by hydrogen fluoride and attention must be given to exhaust ventilation. Explosive reaction may occur above 800 degrees F with finely divided fluorocarbon and metal powder (aluminum or magnesium). Operations such as grinding, buffing or grit blasting may generate such mixtures. Avoid any dust buildup with fluorocarbons and metal mixtures.
Do not exceed recommended baking temperatures. Baking ovens must be properly ventilated. At temperatures above 400 C (750 F), small amounts of carbonyl fluoride can be evolved. This substance irritates the eyes, the skin and respiratory tract. Inhalation of high concentrations my cause lung edema. The effects may be delayed. Individuals with preexisting diseases of the lungs may have increased susceptibility to the toxicity of excessive exposures from thermal decomposition products.
WARNING: This chemical contains Tetrafluoroethylene which is known to the State of California to cause cancer.

ACRYLIC POLYMER

****** SECTION 3 - Hazards Information ******
Cont'd

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: skin

NOTE:
If a chemical listed above is not identified as a carcinogen it is not an "IARC, NTP, or OSHA carcinogen".

****** SECTION 4 - First Aid Measures ******

First Aid Procedures:
Inhalation:
If affected by inhalation of vapor or spray mist, move to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing difficulty persists, or occurs later, consult a physician.
Ingestion:
In the unlikely event of ingestion, DO NOT INDUCE VOMITING. Call a physician immediately and have names of ingredients available.
Skin or eye:
In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician. In case of skin contact, wash thoroughly with soap and water. If irritation occurs, contact a physician.

****** SECTION 5 - Firefighting Measures ******

Flash Point (Method)	Above 200 deg F	Closed Cup
Approx. flammable limits	No Information Available	
Auto ignition temperature	No Information Available	

Hazardous Combustion Products:
CO, CO2, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.
Extinguishing media:
Universal aqueous film-forming foam, carbon dioxide, dry chemical.
Special fire fighting procedures:
Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to prevent pressure build-up.
Fire & explosion hazards:
Combustible liquid. When heated above the flashpoint, emits vapors which, when mixed with air, will burn if an ignition source is present. Fine mist or sprays could ignite at temperatures below the flashpoint.

****** SECTION 6 - Accidental Release Measures ******

Procedures for cleaning up spills or leaks:
Ventilate area. If heated above the flashpoint, remove sources of

****** SECTION 6 - Accidental Release Measures ******
Cont'd

ignition. Prevent skin and eye contact and breathing of vapor.

Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly.

****** SECTION 7 - Handling and Storage ******

Precautions to be taken in handling and storing:
Observe label precautions. Close container after each use. If heated above its flash point, this must be handled as if it were a flammable liquid. Do not transfer contents to bottles or unlabeled containers. Wash thoroughly after handling and before eating or smoking. Do not freeze.
OSHA/NFPA Storage Classification: IIIB
Other precautions:
If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved respirator or appropriate ventilation, and gloves.

****** SECTION 8 - Exposure Controls or Personal Protection ******

Engineering controls and work practices:
Ventilation:
Provide sufficient ventilation in volume and pattern to keep contaminants below applicable exposure limits.

Personal Protective Equipment:
Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.
Respiratory:
Do not breathe vapors or mists. Wear an appropriate, properly fitted NIOSH approved respirator during application and until all vapors and spray mists are exhausted unless air monitoring demonstrates vapor/mist levels are below applicable limits. If respirators are required, use a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A). In confined spaces, or in situations where continuous spray operations are typical, or if proper air-purifying respirator fit is not possible, wear a positive pressure, supplied-air respirator (NIOSH TC-19C). In all cases, follow respirator manufacturer's directions for respirator use.
Protective clothing:
Neoprene gloves and coveralls are recommended.
Eye protection:
Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

****** SECTION 9 - Physical and Chemical Properties ******

Evaporation Rate	Slower than Ether
Vapor Pressure of principal solvent	23.60 mm @ 20 Deg C
Solubility of solvent in water	NIL
Vapor density of principal solvent (Air = 1)	0.60
Approx. Boiling range	100 - 365 DEG (C)
Approx. Freezing range	0 - 342 DEG (C)
Gallon weight (lbs/gal)	11.34
Specific gravity	1.36
Percent volatile by volume	61.71
Percent volatile by weight	47.81
Percent solids by volume	38.29
Percent solids by weight	52.19
Physical state	Liquid
pH (waterborne systems only)	No Data Available
VOC* less exempt (lbs/gal)	1.7
VOC* as packaged (lbs/gal)	0.9

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

****** SECTION 10 - Stability and Reactivity ******

Stability:
Stable
Incompatibility (materials to avoid):
None reasonably foreseeable
Hazardous decomposition products:
CO, C02, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.
Hazardous polymerization:
Will not occur.
Sensitivity to static discharge:
If heated above the flash point, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.
Sensitivity to mechanical impact: None Known

****** SECTION 11 - Toxicological Information ******

No Information Available

****** SECTION 12 - Ecological Information ******

No Information Available

****** SECTION 13 - Disposal Considerations ******

Waste disposal method:

****** SECTION 13 - Disposal Considerations ******
Cont'd

Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers.

****** SECTION 14 - Transportation Information ******

No Information Available

****** SECTION 15 - Regulatory Information ******

TSCA Status:
In compliance with TSCA Inventory requirements for commercial purposes.
DSL Status:
Product is not DSL listed because one or more ingredients are not on the DSL inventory.

Photochemical Reactivity: Non-photochemically reactive

Other Regulatory Information:

CAS #	Ingredient	EPCRA 302	EPCRA TPQ/RQ	EPCRA 311/312	CERCLA 313	CERCLA RQ(lbs)	HAP
1333-86-4	CARBON BLACK	N	NR	C	N	NR	N
112-34-5	ETHANOL, 2-(2-BUTOXYETHOXY)-	N	NR	A,F	Y	NR	Y
102-71-6	TRIETHANOLAMINE	N	NR	C	N	NR	N
60828-78-6	POLYETHYLENE GLYCOL TRIMETHYLNONYLETHER	N	NR	NA	N	NA	N
60828-78-6	POLYETHYLENE GLYCOL TRIMETHYLNONYL ETHER	N	NR	A,C	N	NR	N
9002-84-0	POLYTETRAFLUOROETHYLENE	N	NR	N	N	NR	N
26655-00-5	PERFLUOROALKOXY RESIN	N	NR	N	N	NR	N
7732-18-5	WATER	N	NR	N	N	NR	N
Not Avail	ACRYLIC POLYMER	N	NR	N	N	NR	N
1344-28-1	ALUMINUM OXIDE	N	NR	N	Y	NR	N

Key:
EPCRA: Emergency Planning and Community Right-to-Know Act (aka Title III, SARA)
302: Extremely hazardous substances
311/312 Categories: F = Fire Hazard A = Acute Hazard
R = Reactivity Hazard C = Chronic Hazard
P = Pressure Related Hazard
313 Information: Section 313 Supplier Notification - The chemicals listed above with a 'Y' in the 313 column are subject to reporting requirements of Section 313 of the Emergency Planning and Community

****** SECTION 15 - Regulatory Information ******
Cont'd

Right-to-Know act of 1986 and of 40 CFR 372.
CERCLA: Comprehensive Emergency Response, Compensation and Liability Act of 1980.
HAP = Listed as a Clean Air Act Hazardous Air Pollutant
TPQ = Threshold planning quantity
RQ = Reportable quantity
NA = not available
NR = not regulated

****** SECTION 16 - Additional Information ******

HMIS Rating: H: 1 F: 1 R: 0

Glossary of Terms:
ACGIH - American Conference of Governmental Industrial Hygienists
IARC - International Agency for Research on Cancer
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
STEL - Short term exposure limit
TWA - Time-weighted average
PNOR - Particles not otherwise regulated
PNOC - Particles not otherwise classified

Caution: Do not use in medical applications involving permanent or temporary implantation in the human body. For further information, see "DuPont Medical Caution Statement." H-50102.

NOTICE FROM DUPONT
The data in this material safety data sheet relate only to the specific material designated herein and do not relate to use in combination with any other material or any process.

MSDS prepared by:
Performance Coatings Regulatory Affairs Consultant.