

SECTION 1 - Product and Company Identification

Manufacturer: E.I. du Pont de Nemours & Co.
Du Pont Performance Coatings
Wilmington, DE, 19898

Telephone: Product information: (800) 441-7515
Medical emergency: (800) 441-3637
Transportation emergency: (800) 424-9300
(CHEMTREC)

Product: **DuPont® Ancillary Products**

DOT Shipping Name: See DOT addendum.

Hazardous Materials Information: See Section 10.

INGREDIENTS	CAS #	VAPOR PRESSURE	EXPOSURE LIMITS
Polyvinyl butyral resin	27360-07-2	None	A 1.0 mg/m3 O 1.0 mg/m3 D 1.0 mg/m3 8 & 12 hour TWA
Titanium dioxide	13463-67-7	None	A 10.0 mg/m3 Total Dust A 3.0 mg/m3 Respirable Dust O 15.0 mg/m3 Total Dust O 5.0 mg/m3 Respirable Dust
Triphosphoric acid, aluminum salt (1:1)	13939-25-8	<0.0	A 2.0 mg/m3 TWA Respirable Dust O None

SECTION 2 - Composition/information on ingredients

INGREDIENTS	CAS #	VAPOR PRESSURE	EXPOSURE LIMITS
Acetone	67-64-1	247.0@68.0°F	A 750.0 ppm 15 min STEL A 500.0 ppm O 1000.0 ppm D 500.0 ppm 8 & 12 hour TWA
Butylated phenol-formaldehyde resin	96446-61-2	None	A None O None
Carbon black	1333-86-4	None	A 3.5 mg/m3 O 3.5 mg/m3 D 0.5 mg/m3 8 & 12 hour TWA
Ethyl alcohol	64-17-5	59.0	A 1000.0 ppm O 1000.0 ppm D 1000.0 ppm 8 & 12 hour TWA
Isopropyl alcohol	67-63-0	48.0	O 400.0 ppm D 200.0 ppm 8 & 12 hour TWA A 500.0 ppm 15 min STEL A 400.0 ppm
Methyl ethyl ketone	78-93-3	89.0 @ 0.0	A 300.0ppm 15 min STEL A 200.0 ppm O 200.0 ppm D 300.0 ppm 15 min TWA D 200.0 ppm 8 & 12 hour TWA
Methyl isobutyl ketone	108-10-1	15.1	A 75.0 ppm 15 min STEL A 50.0 ppm O 100.0 ppm
N-butyl alcohol	71-36-3	5.6@68.0°F	A 20.0 ppm O 100.0 ppm D 50.0 ppm 15 min TWA D 25.0 ppm
Phosphoric acid	7664-38-2	None	A 3.0 mg/m3 15 min STEL

Water
7732-18-5 23.6
A None
O None

Yellow iron oxide
51274-00-1 None
A 10.0 mg/m3
O 15.0 mg/m3

Zinc phosphate
7779-90-0 None
O 5.0 mg/m3
Respirable Dust
A None

*A=ACGIH, O=OSHA, D=DuPont, S=Suppliers. Limits are 8 hour TWA unless otherwise specified. Vapor pressure @20°C unless otherwise noted.

SECTION 3 - Hazards identification

Potential Health Effects:

Inhalation:

May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

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:

Acetone

The following medical conditions may be aggravated by exposure: lung disease, eye disorders, skin disorders. Overexposure may cause damage to any of the following organs/systems: blood, central nervous system, eyes, kidneys, liver, respiratory system, skin.

Butylated phenol-formaldehyde resin

May cause eye irritation with discomfort, tearing, or blurred vision. This chemical is a formaldehyde donor. Formaldehyde is an IARC, NTP or OSHA carcinogen and has shown mutagenic activity in laboratory cell culture tests. Formaldehyde has produced tumors in the nasal passages of laboratory animals when exposed to high concentrations for a two year

period. IARC has concluded epidemiology studies found evidence of formaldehyde related nasopharyngeal cancer in humans and have classified formaldehyde as a confirmed human carcinogen. DuPont toxicologists have reviewed these studies and classified formaldehyde as a possible human carcinogen. May cause irritation of the respiratory tract, experienced as nasal discomfort and discharge, coughing and possibly accompanied by chest pain.

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 cancer.

Ethyl alcohol

The following medical conditions may be aggravated by exposure: liver disease. Tests in some laboratory animals indicate this compound may have embryotoxic activity. Tests in animals demonstrate reproductive toxicity. Ingestion may cause any of the following: stupor (central nervous system depression), gastrointestinal irritation. If absorbed through the skin, may be: harmful.

Isopropyl alcohol

The following medical conditions may be aggravated by exposure: dermatitis, respiratory disease. Developmental toxicity was seen in rat's offspring at doses that were maternally toxic. Contact will cause moderate to severe redness and swelling, itching, tingling sensation, painful burning. May cause injury to the cornea of the eyes. Prolonged or repeated exposure may cause damage to any of the following organs/systems: liver. Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights.

Methyl ethyl ketone

Material is irritating to mucous membranes and upper respiratory tract. 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, respiratory system, skin. Prolonged or repeated overexposure may cause any of the following: conjunctivitis, dermatitis. High concentrations have caused embryotoxic effects in laboratory animals. Aspiration may occur during swallowing or vomiting, resulting in lung damage. Ingestion may cause headache, nausea, vomiting, dizziness, and drowsiness.

Methyl isobutyl ketone

The following medical conditions may be aggravated by exposure: asthma, respiratory disease, eye disorders, pulmonary conditions, skin disorders. Repeated or prolonged skin contact may cause any of the following: dryness, cracking of the skin, defatting. Inhalation may cause any of the following: dizziness, stupor (central nervous system depression), drowsiness, respiratory tract irritation.

N-butyl alcohol

May cause abnormal blood forming function with anemia. Liquid splashes in the eye may result in chemical burns.

Phosphoric acid

Ingestion may cause any of the following: burns to mouth and stomach. Skin or eye contact may cause any of the following: burns. Inhalation of vapor may cause any of the following: burns to respiratory system.

Titanium dioxide

In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dust. Analysis of the titanium dioxide concentrations in the rat's lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m³ level are not relevant to the workplace.

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 Contact:

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 - Fire-fighting measures

Flash Point (Closed Cup): See Section 11 for exact values

Flammable Limits: LFL 1.2% UFL 21%

Extinguishing Media:

Universal aqueous film-forming foam, carbon dioxide, dry chemical.

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 and Explosion Hazards:

For flammable liquids, vapor/air will ignite when an ignition source is present. In other cases, when heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

SECTION 6 - Accidental release measures**Steps to be taken in case material is released or spilled:**

Ventilate area. Remove sources of 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. If combustible (flashpoint between 100-200 °F), keep away from heat, sparks and flame. If flammable (flashpoint less than 100 °F), also keep away from static discharges and other sources of ignition. If material is extremely flammable (flashpoint less than 20 °F) or flammable, VAPORS MAY IGNITE EXPLOSIVELY OR CAUSE FLASH FIRE, respectively. Vapors may spread long distances. Prevent buildup of vapors. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120 °F. If product is waterbased do not freeze.

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 / personal protection**Engineering controls and work practices:****Ventilation:**

Provide sufficient ventilation in volume and pattern to keep contaminants below applicable exposure limits.

Respiratory protection

Do not breathe vapors or mists. Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C) and particulate filter (NIOSH TC-84A) during application and until all vapors and spray mists are exhausted. 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. Do not permit anyone without protection in the painting area.

Protective equipment

Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Skin protection

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
Solubility in Water	NIL
Vapor Density	Heavier than air
Approx. Boiling Range(°C)	46.1 - 117.7 °C
Approx. Freezing Range(°C)	-86.6 - -88.8 °C
Gallon weight (lbs/gal)	6.86 - 7.93
Specific Gravity	0.82 - 0.95
Percent Volatile by Volume	84.71 - 99.07
Percent Volatile by Weight	71.20 - 97.77
Percent Solid by Volume	0.93 - 15.29
Percent Solid by Weight	2.23 - 28.80

SECTION 10 - Stability and reactivity**Stability:**

Stable

Incompatibility (materials to avoid):

None reasonably foreseeable

Hazardous Decomposition Products:

CO, CO₂, 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:

For flammable materials (flashpoint less than 100 deg F) and combustibles (flashpoint between 100-200 deg F) if heated above the flashpoint, 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 - Additional Information**Product Code****Ingredients (Product Specific)**

691-474™ Acetone(2.0%), Butylated phenol-formaldehyde resin(5.8%), Carbon black(0.1%), Isopropyl alcohol(16.7%), Methyl ethyl ketone(28.9%), Methyl isobutyl ketone(13.4%* @), N-butyl alcohol(9.1%*), Polyvinyl butyral resin(7.1%), Titanium dioxide(3.2%), Triphosphoric acid, aluminum salt (1:1)(5.0%), Yellow iron oxide(2.2%), Zinc phosphate(2.5%*)

GAL WT: 7.93 WT PCT SOLIDS: 28.80 VOL PCT SOLIDS: 15.29

SOLVENT DENSITY: 6.68 VOC LE: 5.6 VOC AP: 5.4

FLASH POINT: 20°F to below 73°F H: 3 F: 3 R: 1 OSHA STORAGE: IB

TSCA STATUS: In Compliance PHOTO-CHEMICALLY REACTIVE: NO

FG-476™ Ethyl alcohol(14.1%), N-butyl alcohol(80.5%*), Phosphoric acid(2.2%), Water(1.7%)

GAL WT: 6.86 WT PCT SOLIDS: 2.23 VOL PCT SOLIDS: 0.93

SOLVENT DENSITY: 6.77 VOC LE: 6.7 VOC AP: 6.6

FLASH POINT: 20°F to below 73°F H: 2 F: 3 R: 0 OSHA STORAGE: IB

TSCA STATUS: In Compliance PHOTO-CHEMICALLY REACTIVE: NO

Footnotes:

TSCA = in compliance = In compliance with TSCA Inventory requirements for commercial purposes.

ACGIH = American Conference of Government Industrial Hygienists.

IARC = International agency for Research on Cancer.

NTP = National Toxicology Program.

OSHA = Occupational Safety and Health Administration.

PNOR = Particles Not Otherwise Regulated.

PNOC = Particles Not Otherwise Classified.

STEL = Short Term Exposure Limit.

TWA = Time Weighted Average.

TM = Is a Trademark of E.I. du Pont de Nemours & Co.

* = Section 313 Supplier Notification: These chemicals are subject to the reporting requirements of Section 313 of the Emergency planning and Right-to-Know act of 1986 and of 40 CFR 372.

@ = Clean Air Act Hazardous Air Pollutant.

= EPCRA Section 302 - Extremely Hazardous Substance.

NOTICE:

The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Product Manager - Refinish Sales

Prepared by: HazCom Coordinator