

September 1, 1985

MATERIAL SAFETY DATA SHEET

LACQUER THINNERS AND CLEANING SOLVENTS

Section I**Manufacturer**

E. I. du Pont de Nemours & Co. (Inc.)
 Finishes & Fabricated Products Dept.
 Wilmington, Delaware 19898
 Telephone: Product information (800) 441-7515
 Medical emergency (800) 441-3637
 Transportation emergency (800) 424-9300
 (CHEMTREC)

Product: Lacquer Thinners and Cleaning Solvents
 D.O.T. Hazard Class: Flammable Liquid
 Paint Related Material NA 1263

Section II — Hazardous Ingredients (See Section X for specific product codes)

Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
1. Butyl acetate	123-86-4	8	150ppm-A,0
2. n-Butyl alcohol	71-36-3	4	25ppm-D, 100ppm O
3. Acetone	67-64-1	185	750ppm-A, 1000ppm O
4. Methanol	67-56-1	96	200ppm-A,0
5. Toluene	108-88-3	29	100ppm-A 200ppm-O
6. Isopropyl alcohol	67-63-0	31	400ppm-A,0
7. Dibasic esters			
a) Dimethyl glutarate	1119-40-0	14 (at 100°C)	10mg/m ³ -D
b) Dimethyl succinate	106-65-0		
c) Dimethyl adipate	627-93-0		
8. 1-Methoxy-2-propanol acetate	108-65-6	2.4	100ppm-D
9. 2-Ethoxy butyl acetate	112-07-02	0.3	25ppm-D
10. Xylene	1330-20-7	8	100ppm-A,0
11. VM&P Naphtha	64742-89-8	~45	100ppm-A,0
12. Mineral Spirits	64742-88-7	~5	100ppm-A,0
13. Aromatic hydrocarbons	64742-95-6	~5	50ppm-A,0

*A = ACGIH TLV O = OSHA D = Du Pont internal limit.

Section III — Physical Data

Evaporation rate: Slower than ether

Vapor density: Heavier than air

Solubility in water: Slight

Percent volatile by volume:
100% (3929S — 93%)

Approximate boiling range:
129°F-437°F

Density: 6.4-7.5 #/gallon

Section IV: Fire & Explosion Data

Flash point (Method): 20-73F (Closed cup).

Approx. flammable limits: 1.1-14%.

Extinguishing media: 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 cool closed containers to prevent pressure build up.

Unusual fire & explosion hazards: 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 V — Health Hazard Data

Ingestion: Gastro-intestinal distress.

In the unlikely event of ingestion, call a physician immediately and have names of ingredients available.

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. 1-Methoxy-2-propanol acetate and n-butyl alcohol may cause moderate eye burning and can be absorbed through the skin in harmful amounts. Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors. Excessive human exposure to methanol including absorption through the skin may lead to: fatigue, headache, anaesthetic neurologic effects, and visual difficulties, ultimately including blindness. Extremely high concentrations of butyl acetate have caused blood changes and weakness in laboratory animals. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Dibasic esters inhalation overexposure in rats has shown mild injury to the olfactory region of the nose. 2-Ethoxy butyl acetate can be absorbed through the skin in harmful amounts. In studies in laboratory animals has produced damage to red blood cells and kidneys. If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.

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.

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 with soap and water. If irritation occurs, contact a physician.

Section VI — Reactivity Data

Stability: stable

Incompatibility (materials to avoid): none reasonably foreseeable

Hazardous decomposition products: CO, CO₂, smoke

Hazardous polymerization: Will not occur

Section VII — Spill or Leak Procedures

Steps to be taken in case material is released or spilled:

Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Confine and remove with inert absorbant.

Waste disposal method: Do not allow material to contaminate ground water systems. Incinerate in accordance with federal, state and local requirements. Do not incinerate in closed containers.

Section VIII — Special Protection Information

Respiratory: Do not breathe vapors or mists.

Wear a properly fitted vapor/particulate respirator approved by NIOSH/MSHA (TC-23C) for use with paints during application and until all vapors and spray mist are exhausted.

Follow the respirator manufacturer's directions for respirator use.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Neoprene gloves and coveralls are recommended.

Eye protection: Desirable in all industrial situations. Include splash guards or side shields.

Section IX — Special Precautions

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.

Section X — Product Codes

Product Code	Ingredients
3602S	2, 3, 5, 6, 7, 8, 9, 11, 13
3608S	3, 4, 5, 6, 7, 8, 10, 11
3613S	3, 5, 6, 11
3642S	1, 3, 4, 5, 6, 8, 11
3661S	2, 3, 5, 6, 7, 8, 11, 13
3696S	3, 5, 7, 8, 10, 11
3919S	12
3924S	3, 5, 6, 11
3929S, 3939S	5, 12
3979S	8, 9, 12, 13

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 in any process.

Product Manager
Refinish Sales

**MATERIAL SAFETY
DATA SHEET**

September 1, 1985

CENTARI® ACRYLIC ENAMEL
Section I**Manufacturer**

E. I. du Pont de Nemours & Co. (Inc.)
 Finishes & Fabricated Products Dept.
 Wilmington, Delaware 19898
 Telephone: Product information (800) 441-7515
 Medical emergency (800) 441-3637
 Transportation emergency (800) 424-9300
 (CHEMTREC)

Product: Centari Acrylic Enamel
 D.O.T. Hazard Class: Flammable liquid
 Paint UN 1263

**Section II — Hazardous Ingredients (See Section X for
information on selected products which have additional
ingredients)**

Primary Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
Toluene	108-88-3	29	100ppm-A, 200ppm-O
Xylene	1330-20-7	8	100ppm-A, 0
Methyl Ethyl Ketone	78-93-3	95	200ppm-A, 0
VM&P Naphtha	64742-89-8	~45	100ppm-A, 0
Mineral Spirits Aromatic	64742-88-7	~5	100ppm-A, 0
Hydrocarbons	64742-95-6	~5	50ppm-A, 0
Polyester Resin	None	None	None
Acrylic Resin	None	None	None

*A = ACGIH TLV O = OSHA D = Du Pont internal limit

Section III — Physical Data

Evaporation rate: Slower than ether
 Vapor density: Heavier than air
 Solubility in water: Slight
 Percent volatile by volume: 56.6-72.3%
 Approximate boiling range: 172°F-426°F
 Density: 7.69-9.55 #/gallon

Section IV: Fire & Explosion Data

Flash point (Method): 20-73F (Closed cup).
 Approx. Flammable limits: 1.1-14%.
 Extinguishing media: 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 cool
 closed containers to prevent pressure build up.
 Unusual fire & explosion hazards: 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 V — Health Hazard Data

Ingestion: Gastro-intestinal distress.

In the unlikely event of ingestion, call a physician immediately
 and have names of ingredients available.

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. Laboratory studies with
 rats have shown that petroleum distillates cause kidney
 damage and kidney or liver tumors. These effects were not
 seen in similar studies with guinea pigs, dogs, or monkeys.
 Several studies evaluating petroleum workers have not
 shown significant increases of kidney damage nor kidney or
 liver tumors. Extremely high concentrations of butyl acetate
 have caused blood changes and weakness in laboratory
 animals. Very high concentrations of Methyl ethyl ketone
 have caused embryotoxic effects in laboratory animals.
 Reports have associated repeated and prolonged
 overexposure to solvents with permanent brain and nervous
 system damage.

If affected by inhalation of vapor or spray mist, remove to
 fresh air. If breathing difficulty persists, or occurs later,
 consult a physician.

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.
 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 with soap and water. If irritation
 occurs, contact a physician.

Section VI — Reactivity Data

Stability: Stable

Incompatibility (materials to avoid): None reasonably
 foreseeable

Hazardous decomposition products: CO, CO₂, smoke, oxides of
 heavy metals reported in Section X

Hazardous polymerization: Will not occur

Section VII — Spill or Leak Procedures

Steps to be taken in case material is released or spilled:

Ventilate area. Remove sources of ignition. Prevent skin
 contact and breathing of vapor. Wear properly fitted vapor/
 particulate respirator (NIOSH/MSHA TC-23C). If the material
 has been activated with an isocyanate, wear a positive
 pressure supplied air respirator (NIOSH/MSHA TC-19C).
 Confine and remove with inert absorbant.

Deactivate isocyanate containing spills with:

20% Surfactant (Tergitol TMN-10)

80% Water

or

0-10% Ammonia

2-5% Detergent

Balance Water

Waste disposal method: Do not allow material to contaminate
 ground water systems. Incinerate absorbed material in
 accordance with federal, state and local requirements. Do
 not incinerate in closed containers.

Section VIII — Special Protection Information

Respiratory: Do not breathe vapors or mists.

When this product is used with an isocyanate hardener, wear a positive pressure supplied air respirator (NIOSH/MSHA TC-19C approved) when mixing the isocyanate hardener with the paint, during application and until all vapor and spray mists are exhausted. Do not permit anyone without respiratory protection in the painting area. Refer to the isocyanate hardener label instructions and MSDS for further information. Follow the respirator manufacturer's directions for respirator use.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Neoprene gloves and coveralls are recommended.

Eye protection: Desirable in all industrial situations. Include splash guards or side shields.

Section IX — Special Precautions

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.

Other precautions: Do not sand, flame cut, braze or weld dry coating without a NIOSH/MSHA approved respirator or appropriate ventilation.

Section X — Notes

Product Code	Additional Ingredients	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
700A,	3, 7		
701A	3		
722A, 723A, 730A, 732A, 734A, 741A,	7		
742A, 750A, 763A, 764A, 765A, 767A	5		
708A	6		
710A, 711A, 713A, 727A	1, 4, 7		
731A, 733A	1, 7		
737A	1, 2, 7		
738A	1, 7		
761A	2, 7		
762A			
(1) Lead Chromate	18454-12-1	None	50ug/m ³ -0 as LEAD 150ug/m ³ -A as LEAD 0.05mg/m ³ -A as CR 0.1mg/m ³ -0 as CR

Lead Chromate is an IARC/OSHA carcinogen. Over-exposure to lead may cause adverse effects to the blood forming, nervous, urinary, and reproductive systems including embryotoxic effects. Symptoms may include loss of appetite, anemia, disturbance of sleep and fatigue. (See OSHA Standard 29CFR1910.1025 for more information on lead)

(2) Antimony 7440-36-0 None 0.5mg/m³-A as Sb

Excessive exposures to antimony may produce gastrointestinal upset, nervous complaints, inflammation of the mucous membranes of the nose and throat, metallic taste and stomatitis. May cause skin irritation. Antimony is present in lead chromate. See lead chromate (1).

(3) Titanium Dioxide 13463-67-7 None 10mg/m³-A, 15mg/m³-0

In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dioxide dust. Analysis of the titanium dioxide concentrations in the rats' 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.

(4) Lead Molybdate 7439-98-7 None 10mg/m³-A as MO

(See also lead in ingredient (1))

(5) Carbon Black 1333-86-4 None 3.5mg/m³-A

(6) Aluminum 7429-90-5 None 10mg/m³-A

(7) Butyl Acetate 123-86-4 12 150ppm-A,0

Extremely high concentrations of butyl acetate have caused blood changes and weakness in laboratory animals.

*A = ACGIH TLV O = OSHA D = Du Pont internal limit

Notice: 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 in any process.

Product Manager
Refinish Sales

MATERIAL SAFETY DATA SHEET



September 1, 1985

ADDITIVES FOR TOPCOATS

Section I**Manufacturer:**

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Wilmington, Delaware 19898
Telephone: Product information (800) 441-7515
Medical emergency (800) 441-3637
Transportation emergency (800) 424-9300
(CHEMTREC)

Product: 189S, 259S, FEE, 903S, 4528S, 5450S,
LF 5450S, 7007

D.O.T. Hazard Class: Flammable liquid
Driers, paint, liquid N.O.S. UN1168

Section II — Hazardous Ingredients (See Section X for specific product codes)

Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
1. n-Butyl alcohol	71-36-3	4	25ppm-D, 100ppm-O
2. Toluene	108-88-3	22	100ppm-A
3. Isopropyl alcohol	67-63-0	31	400ppm-A,0
4. VM&P naphtha	64742-89-8	~45	100ppm-A,0
5. Aromatic hydrocarbon	64742-95-6	~5	50ppm-A,0
6. Mineral spirits	64742-88-7	~5	100ppm-A,0
7. 2, 4-Pentanedione	123-54-6	7	Unknown
8. Xylene	1330-20-7	8	100ppm-A,0
9. Methyl ethyl ketoxime	96-29-7	10	50ppm-D
10. Tin drier	77-58-7	0	2 mg/m ³
11. Cobalt drier	7440-48-4	0	.01 mg/m ³ D,0; .05 mg/m ³ -A As Co
12. Manganese drier	1336-93-2	0	5 mg/m ³ A,D,0 As Mn
13. Lead drier	123-96-0	0	.05 mg/m ³ As Pb

*A = ACGIH TLV O = OSHA D = Du Pont internal limit

Section III — Physical Data

Evaporation rate: Slower than ether
Vapor density: Heavier than air

Solubility in water: Slight
Percent volatile by volume: 50-99.8%

Approximate boiling range: 170°F-410°F
Density: 7.2-7.7 #/gallon

Section IV: Fire & Explosion Data

Flash point (Method): 20-73F (Closed cup).

Approx. Flammable limits: 1.1-14%.

Extinguishing media: 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 cool closed containers to prevent pressure build up.

Unusual fire & explosion hazards: 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 V — Health Hazard Data

Ingestion: Gastro-intestinal distress.

In the unlikely event of ingestion, call a physician immediately and have names of ingredients available.

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If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.

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.

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 with soap and water. If irritation occurs, contact a physician.

Section VI — Reactivity Data

Stability: Stable

Incompatibility (materials to avoid): None reasonably foreseeable

Hazardous decomposition products: CO, CO₂, smoke

Hazardous polymerization: Will not occur

Section VII — Spill or Leak Procedures

Steps to be taken in case material is released or spilled:

Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Confine and remove with inert absorbant.

Waste disposal method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state and local requirements. Do not incinerate in closed containers.

Section VIII — Special Protection Information

Respiratory: Do not breathe vapors or mists.

When these products are used with paints requiring isocyanate hardener or activator, wear a continuous flow supplied air respirator (NIOSH/MSHA TC-19C approved) when mixing the hardener/activator with the paint, during application and until all vapor and spray mists are exhausted. Do not permit anyone without respiratory protection in the painting area. Refer to the hardener label instructions and MSDS for further information. If these products are used without an isocyanate hardener, a properly fitted NIOSH/MSHA TC-23C approved paint spray respirator can be used.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Neoprene gloves and coveralls are recommended.

Eye protection: Desirable in all industrial situations. Include splash guards or side shields.

Section IX — Special Precautions

Precautions to be taken in handling and storing: Observe label

precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.

Section X — Product Codes

Product Code	Ingredients
189S	7, 10
259S	8
FEE	1
903S	3, 4, 5, 6, 8
4528S	2, 3, 4, 8
5450S	5, 6, 13
LF5450S	5, 6, 11, 12
7007S	1

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Product Manager
Refinish Sales