

MATERIAL SAFETY DATA SHEET



ADDITIVES FOR TOPCOATS

Section I

Manufacturer

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

Product: 189S, 209S, 259S, FEE, 903S, 4528S, 5450S, LF 5450S,
7007S, 929-5050

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

Hazardous Materials Identification System:
H = 2, F = 3, R = 0.

Section II — Hazardous Ingredients (See Section X for ingredients listed by product code)

Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
1. Formaldehyde	50-00-0	Unknown	1.0ppm-A, 3.0ppm-O, 2.0ppm-A-(STEL), 5.0ppm-O
2. N-Butyl alcohol	71-36-3	5.5	100ppm-O, 25ppm-D, 50ppm-C-A
3. Toluene	108-88-3	36.7	100ppm-A, 200ppm-O, 150ppm-A-(STEL), 300ppm-C-O 500ppm-O Max 10 Min
4. Isopropyl alcohol	67-63-0	33	400ppm-A,O, 500ppm-A-(STEL)
5. 2,4-Pentanedione	123-54-6	7	Unknown
6. Xylene	1330-20-7	25	100ppm-A,O, 150ppm-A-(STEL)
7. Aromatic hydrocarbon	64742-95-6	10	25ppm-O, 50ppm-D
8. VM&P naphtha	64742-89-8	15	100ppm-D, 300ppm-A, 500ppm-O
9. Heavy naphtha	64742-48-9	None	100ppm-D
10. Medium mineral spirits	64742-88-7	10	100ppm-A,D, 500ppm-O
11. Amorphous silica	7631-86-9	None	10mg/m ³ -A, 15mg/m ³ -O, 6mg/m ³ -D
12. Cobalt octoate	7440-48-4	None	.05mg/m ³ -A 0.1mg/m ³ -O-S
13. Manganese naphthenate	1336-93-2	None	5mg/m ³ -C,A,O-Mn,
14. Lead	7439-92-1	None	150µg/m ³ -A, 50µg/m ³ -O
15. Tin	77-58-7	None	2mg/m ³ -D

16. Acrylic resin	9011-14-7	None	Unknown
17. Methyl ethyl ketone	78-93-3	76	200ppm-A-O, 300ppm-A-(STEL)
18. Propylene glycol monomethyl ether acetate	108-65-6	3.8	Unknown
19. Hydrous magnesium silicate (talc)	14807-96-6	None	2.0mg/m ³ -A-D, 5mg/m ³ -O
20. Ethyl acetate	141-78-6	76	400ppm-A,O

*A = ACGIH TLV, O = OSHA, D = Du Pont internal Limit,
S = Supplier Furnished Limit, STEL = Short Term Exposure Limit (15 mins.), C = Ceiling

Section III — Physical Data

Evaporation rate: Slower than ether Volume % volatile: 55.8-99.7%
Solubility in water: Miscible Weight % volatile: 44.5-99.7%
Vapor density: Heavier than air V.O.C. (#/gal): 3.2-8.3
Boiling range: 80-190°F
Gal. wt. (#/gal): 7.2-8.4

Section IV — Fire & Explosion Data

Flash point (Closed Cup): 73-100°F
Approx. flammable limits: 0.9-12.7%
Extinguishing media: Water spray, 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 (See Also Section X Notes)

General effects

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.

Repeated and prolonged overexposure to solvents may lead to permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are signs that solvent levels are too high. If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician. These products may be used in combination with a hardener which contains an isocyanate. Exposure to isocyanates may cause asthma-like reactions with shortness of breath, wheezing, cough or lung sensitization. This effect may be delayed for several hours after exposure. Individuals with lung or breathing problems or prior reaction to isocyanates must not be exposed to vapors or spray mist of this product.

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.

Section V — Health Hazard Data — Continued

In case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

Specific effects

Formaldehyde: Has produced tumors in the nasal passages of laboratory animals when exposed to high concentrations for a two year period. Epidemiology studies conducted to date have not found evidence of formaldehyde related tumor induction in humans. Is an IARC, NIP or OSHA carcinogen. Has shown mutagenic activity in laboratory cell culture tests.

N-Butyl Alcohol: Liquid splashes in the eye may result in chemical burns. Toluene: Recurrent overexposure may result in liver and kidney injury. High airborne levels have produced irregular heart beats in animals and occasional palpitations in humans. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown. Isopropyl Alcohol: Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. High oral doses have caused anemia in laboratory animals.

2,4 Pentanedione: Can be absorbed through the skin in harmful amounts. Repeated exposures to high concentrations has caused adverse health effects in laboratory animals. These effects involved the central nervous system, immune system, and the red blood cells forming system. No effect was seen at 100ppm. The odor is disagreeable at a few ppm. Xylene: High concentrations have caused embryotoxic effects in laboratory animals. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts. VM&P Naphtha, Medium and Heavy Mineral Spirits: 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. Cobalt Octoate and Manganese Naphthenate: Contact may cause skin irritation with discomfort or rash. Lead: Overexposure to lead may cause adverse effects to the blood forming, nervous, urinary, reproductive systems including embryotoxic effects. Symptoms may include loss of appetite, anemia, disturbance of sleep and fatigue. See OSHA lead standard 29CFR1910.1025 for exposures longer than 8 hours. The OSHA exposure limit is reduced by this formula: Limit (in $\mu\text{g}/\text{m}^3$) = 400/hours worked in the day. Can be absorbed through the skin in harmful amounts. Methyl Ethyl Ketone: High concentrations have caused embryotoxic effects in laboratory animals. Methyl Ethyl Ketone (MEK) has been demonstrated to potentiate (i.e., shorten the time of onset) the peripheral neuropathy caused by either N-Hexane or Methyl N-Butyl Ketone. MEK by itself has not been demonstrated to cause peripheral neuropathy. Liquid splashes in the eye may result in chemical burns. Propylene Glycol Monomethyl Ether Acetate: May cause moderate eye burning. Recurrent overexposure may result in liver and kidney injury. Hydrous Magnesium Silicate (talc): Repeated and prolonged overexposure to talc may lead to typical x-ray changes and chronic lung disease. Ethyl Acetate: Prolonged and repeated high exposures of laboratory animals resulted in secondary anemia with an increase in white blood cells; fatty degeneration, cloudy swelling and an excess of blood in various organs.

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. Wear a properly fitted vapor/particulate respirator (NIOSH/MSHA TC-23C). 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 positive pressure, 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. Refer to the hardener label 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. In confined spaces or in situations where continuous spray operations are typical or if proper respirator fit is not possible, wear a positive pressure, supplied-air respirator (TC-19C). In all cases, follow the respirator manufacturer's directions for respirator use; do not permit anyone without respiratory protection in the painting area.

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 — Hazardous Ingredients by Product Code

Product Code	Ingredients (See Section II)
189S	5, 15
259S	6, 16
289S	15, 20
FEE	2, 16
903S	4, 6, 7, 8, 10, 16
4528	3, 4, 6, 8, 11, 16
5450S	7, 9, 10, 12, 13, 14
LF 5450S	7, 9, 10, 12, 13
7007S	1, 2, 16
929-5050	10, 17, 18, 19

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.

"The following notice is required by California Proposition 65. 'Warning: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.'"

Product Manager
Refinish Sales