

MATERIAL SAFETY DATA SHEET



May 1, 1988

SYNTHETIC ENAMEL, TRACTOR AND IMPLEMENT ENAMELS ALUMINUM PAINTS, SPATTER FINISHES

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: Synthetic Enamel, 250S, 252S, 253S, 256S, 257S, 389S,
781S, 789S

D.O.T. Hazard Class: Flammable Liquid
Paint UN 1263

Hazardous Materials Identification System:
781S, 789S: H = 2, F = 3, R = 1.
All others: H = 2, F = 3, R = 0.

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

Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
1. Butyl acetate	123-86-4	8	150ppm-A,O; 200ppm-A-(STEL)
2. Acetone	67-64-1	184	750ppm-A; 1000ppm-O; 1000ppm-A-(STEL)
3. Methyl ethyl ketone	78-93-3	71	200ppm-A,O; 300ppm-A-(STEL)
4. Toluene	108-88-3	36.7	100ppm-A; 200ppm-O; 150ppm-A-(STEL); 300ppm-O-C 500ppm-O Max 10 Min
5. Xylene	1330-20-7	25	100ppm-A,O; 150ppm-A-(STEL)
6. Aromatic hydrocarbons	64742-95-6	10	25ppm-O; 50ppm-D
7. VM&P naphtha	64742-89-8	15	100ppm-D; 300ppm-A; 500ppm-O
8. Medium mineral spirits	64742-88-7	10	100ppm-A,D; 500ppm-O
9. Aluminum	7429-90-5	None	10mg/m ³ -A
10. Carbon black	1333-86-4	None	3.5mg/m ³ -A,O
11. Lead chromate molybdate	12656-85-8	None	150 µg/m ³ -A-Pb; 50 µg/m ³ -O-Pb; 50 µg/m ³ -O-Cr; 100 µg/m ³ -O-Cr
12. Lead chromate	18454-12-1	None	150 µg/m ³ -A-Pb; 50 µg/m ³ -O-Pb; 50 µg/m ³ -O-Cr; 100 µg/m ³ -O-Cr
13. Lead	7439-92-1	None	150 µg/m ³ -A; 50 µg/m ³ -O-Cr
14. Titanium dioxide	13463-67-7	None	10.0mg/m ³ -A; 15mg/m ³ -O

15. Dibutyl tin dilaurate	77-58-7	.2	1mg/m ³ -A,O Unknown
16. Alkyd resins	67922-67-2	None	Unknown
17. Linseed oil	8001-26-1	None	10mg/m ³ -A
18. 2, 4 Pentanedione	123-54-6	7	Unknown
19. Lead Drier	61790-14-5	None	150 g/m ³ -A, 50 g/m ³ -O
20. Phthalocyanine blue pigment	147-14-8	None	10mg/m ³ -D
21. Toluidine pigment	None	None	Unknown
22. Iron oxide	1309-37-1	None	Unknown
23. Phthalocyanine green pigment	None	None	10mg/m ³ -D
24. Acrylic copolymer	96591-17-2	None	Unknown
25. Quinacridone pigment	1047-16-1	None	10mg/m ³ -D
26. Perylene pigment	None	None	Unknown
27. Ester gum	None	None	Unknown

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

Section III — Physical Data

Evaporation Rate: Slower than ether Gal. Wt. (#/gal): 7.63-9.03

Solubility in water: Miscible Volume % Volatile: 59.2-69.9%
Vapor Density: Heavier than air Weight % Volatile: 49.1-61.8%
Boiling Range: 54°F-218°F V.O.C. — (#/gal): 3.8-5.4

Section IV — Fire & Explosion Data

Flash Point (Closed Cup): 73-100°F
Approx. flammable limits: 0.8-13.1%
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**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.

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.

Specific effects

Butyl Acetate: Extremely high concentrations have caused blood changes and weakness in laboratory animals. **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. **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. **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 and Medium 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. **Lead Chromate Molybdate, Lead Chromate, Lead and Lead Drier:** 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. These pigments are NTP carcinogens. Lead can be absorbed through the skin in harmful amounts. **Titanium Dioxide:** In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m^3 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/m^3 level are not relevant to the workplace. **Dibutyl tin dilaurate:** Causes eye corrosion and permanent injury. Contact may cause skin burns. Can be absorbed through the skin in harmful amounts. **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 cell forming system.

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 II

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 absorbent.

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.

Wear a properly fitted NIOSH/MSHA approved paint spray respirator (TC-23C) 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 respirator fit is not possible, or if this product is used with an isocyanate additive (Dulux® Plus), wear a positive pressure, supplied-air respirator (TC-19C). Refer to the additive label and MSDS for further information. In all cases, follow the respirator manufacturer's directions for respirator use; do not permit anyone without 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)
85101Q, 85102Q, 85103Q, 85106Q	2, 4, 5, 6, 7, 8, 14, 16, 19
85104Q, 85303Q, 85304Q	2, 4, 5, 6, 7, 8, 12, 14, 16, 19
85201Q	2, 4, 5, 6, 7, 8, 14, 16, 19, 20
85202Q	2, 4, 6, 7, 8, 16, 19, 20
85305Q	2, 4, 5, 6, 7, 8, 11, 12, 16, 19
85306Q	2, 4, 5, 6, 7, 8, 11, 12, 14, 16, 19
85402Q	2, 4, 6, 7, 8, 16, 19, 21
85403Q	2, 4, 6, 7, 8, 12, 16, 19, 21
85151Q, 85154Q, 85251Q, 85252Q	2, 4, 5, 6, 7, 8, 9, 16, 19
85253Q	2, 4, 5, 6, 7, 8, 16, 19, 20
85351Q	2, 4, 5, 6, 7, 8, 16, 19, 23
85353Q	1, 2, 3, 4, 5, 6, 7, 8, 16, 19, 24
85354Q	1, 2, 3, 4, 5, 6, 7, 8, 16, 19, 22, 24
85451Q	1, 2, 3, 4, 5, 6, 7, 8, 16, 19, 22, 24, 25
85551Q	2, 4, 5, 6, 7, 8, 16, 19, 26
250S	5, 6, 7, 8, 11, 12, 16, 19, 22
252S	5, 6, 7, 8, 14, 16, 19
253S	5, 6, 7, 8, 16, 19, 21
256S	5, 6, 7, 8, 10, 16, 19
389-259	15, 18
781S	5, 6, 8, 9, 16, 17, 27
789S	8, 9, 16
257S	5, 6, 7, 8, 10, 13, 14, 16
85152Q	2, 4, 5, 6, 7, 8, 9, 10, 13, 16

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