

**MATERIAL SAFETY  
DATA SHEET**

September 1, 1985

**ISOCYANATE ACTIVATORS,  
HARDENERS AND ADDITIVES**
**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: 77S, 192S, 195S, 355S, 582S, 782S, 792S, 793S,  
 VG-Y-1421

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. Butyl acetate	123-86-4	8	150ppm-A,0
2. Toluene	108-88-3	22	100ppm-A, 200ppm-0
3. Ethyl acetate	141-78-6	76	100ppm-A,0
4. Aromatic hydrocarbons	64742-95-6	~5	50ppm-A,0
5. Polymeric Hexamethylene Diisocyanate	28182-81-2	(Note 1)	Unknown
6. Polymeric Isophorone Diisocyanate	None	—	(Note 2)

Note 1: Free Hexamethylene Diisocyanate monomer (HDI) is less than 0.2% by weight.

Note 2: Free Isophorone diisocyanate monomer is less than 0.7% by weight. Exposure limits are 0.01 ppm A for the monomer.

\*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: 31.6-72.9%  
 Approximate boiling range: 168°F-401°F  
 Density: 8.07-8.97 #/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: 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. Overexposure to solvents may cause nose and throat irritation. May cause central nervous system effects such as headache, dizziness, nausea, and loss of consciousness. Repeated extremely high exposures of laboratory animals to ethyl acetate resulted in secondary anemia with an increase in white blood cells, fatty degeneration, cloudy swelling and an excess of blood in various organs. 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. 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. If the material has been activated with an isocyanate, may also cause allergic skin reactions.

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 in sealed containers. Do not mix enamel and activator until ready to use.

Incompatibility (materials to avoid): Water, alcohols

Hazardous decomposition products: CO, CO<sub>2</sub>, smoke.

Hazardous polymerization: Will not occur.

### Section VII — Spill or Leak Procedures

Steps to be taken in case material is released or spilled: Do not breathe vapors. Do not get in eyes or on skin. Wear positive pressure supplied air vapor/particulate respirator (NIOSH/MSHA TC-19C if possible, otherwise NIOSH/MSHA TC-23C), eye protection, gloves and protective clothing. Remove ignition sources. Absorb with inert material. Ventilate area. Pour liquid decontaminate solution over the spill and allow to sit 10 minutes, minimum. Typical decontamination solutions are:

- 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.

Wear a positive pressure supplied air respirator (NIOSH/MSHA TC-19C) while mixing activator with any paint or clear enamel, during application and until all vapors and spray mist are exhausted. Individuals with a history of lung or breathing problems or prior reaction to isocyanate should not use or be exposed to this product. 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 and 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 — Product Codes

Product Code	Ingredients
192S, 582S, 782S, 792S	1, 3, 4, 5
195S	1, 3, 5
355S, 793S	1, 2, 3, 4, 5
VG-Y-1421	3, 5
77S	1, 2, 4, 6

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