MSDS NO. 12RS

MATERIAL SAFETY DATA SHEET

000121

May 1, 1988

ISOCYANATE ACTIVATORS, HARDENERS AND ADDITIVES

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: 77S, 192S, 195S, 355S, 582S, 782S, 792S, 793S, VG-Y-1421
D.O.T. Hazard Class: Flammable Liquid
Driers, paint, liquid N.O.S. UN 1168

Hazardous Materials Identification System:
H = 3, F = 3, R = 1.

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

Ingredients	CAS Number	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
1. Butyl acetate	123-86-4	8	150ppm-A, O; 200ppm-A-(STEL)
2. Toluene	108-88-3	36.7	100ppm-A; 200ppm-O; 150ppm-A-(STEL); 300ppm-O-C 500ppm-O Max 10 Min
3. Diethylene glycol monobutyl ether	112-34-5	0.1	5.0ppm-D
4. Trixylenyl phosphate	25155-23-1	1	Unknown
5. Ethyl acetate	141-78-6	76	400ppm-A,O
6. Aromatic hydrocarbons	64742-95-6	10	25ppm-O; 50ppm-D
7. Light stabilizer	None	Unknown	0.1mg/m³-S
8. 1,6 Hexamethylene diisocyanate	822-06-0	Unknown	5.0 ppb-A,D; 20 ppb-C,S
9. Aliphatic polyisocyanate	28182-81-2	None	1.0mg/m³-S
10. Polymeric isophorone diisocyanate	None	None	**

*A=ACGIH TLV, O=OSHA, D=Du Pont internal limit, S=Supplier Furnished Limit, STEL=Short Term Exposure Limit (15 mins.), C=Ceiling
**Free Isophorone Diisocyanate monomer is less than 0.7% by weight. Exposure limits are 0.01 ppm-A for the monomer.

Section III — Physical Data

Evaporation rate: Slower than ether
Solubility in water: Miscible
Vapor density: Heavier than air
Boiling range: 76-472°F
Gal. wt. (#/gal): 8.07-9.10
Volume % volatile: 25.9-71.6%
Weight % volatile: 21.2-66.0%
V.O.C. (#/gal): 1.7-5.5

Section IV — Fire & Explosion Data

Flash point (Closed cup): 73-100°F
Approx. flammable limits: 0.9-11.2%
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

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. 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.
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. *Toulene:* 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. *Diethylene Glycol Monobutyl Ether:* Contact may cause skin irritation with discomfort or rash. Extremely high concentrations have caused embryotoxic effects in laboratory animals. May cause abnormal kidney function. High doses in laboratory animals have shown non-specific effects such as irritation, weight loss, moderate blood changes. Tests for mutagenic activity in bacterial or mammalian cell cultures have been inconclusive. *Trixylenyl Phosphate:* Has produced delayed neurotoxicity via oral and dermal routes in studies on the hen. *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. *Light Stabilizer:* Causes severe eye irritation. Contact may cause skin irritation with discomfort or rash. *1,6 Hexamethylene Diisocyanate:* May cause temporary upper respiratory and/or lung irritation with cough, difficulty breathing, or shortness of breath. Overexposure may cause asthma-like

Section V — Health Hazard Data — Continued

reactions with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Prolonged skin contact may cause chemical burns. Liquid splashes in the eye may result in chemical burns. Individuals with preexisting lung disease, asthma or breathing difficulties may have increased susceptibility to the toxicity of excessive exposures. *Aliphatic Polyisocyanate or Polymeric Isophorone Diisocyanate:* Repeated exposure may cause allergic skin rash, itching, swelling. Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Individuals with preexisting lung disease, asthma, or breathing difficulties may have increased susceptibility to the toxicity of excessive exposures.

Section VI — Reactivity Data

Stability: Stable
Incompatibility (materials to avoid): none reasonably foreseeable
Hazardous decomposition products: CO, CO_2, 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 a positive pressure supplied air vapor/particulate respirator (NIOSH/MSHA TC-19C), eye protection, gloves and protective clothing. Remove sources of ignition. 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 mists 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. 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 — Hazardous Ingredients by Product Code

Product Code	Ingredients (See Section II)
192S, 195S, 582S, 782S	1, 5, 6, 8, 9
355S	1, 2, 3, 5, 6, 7, 8, 9
793S	1, 2, 3, 4, 5, 6, 7, 8, 9
VG-Y-1421	1, 6, 8, 9
77S	1, 2, 6, 10
2000S — Part B	1, 2, 6, 8, 9

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

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