

1. Identification of the substance/mixture and of the company/undertaking

Supplier: Dupont Canada  
P.O. Box 2200  
Streetsville, Mississauga, ON, L5M, 2H3

Manufacturer: E. I. du Pont de Nemours and Company.  
DuPont Performance Coatings  
Wilmington, DE 19898

Telephone: Product information: (800) 387-2122  
Medical emergency: (800) 441-3637  
Transportation emergency: (613) 996-6666 (CANUTEC)

Product Identifier: Imron® Activators

Product Use: Hardener for professional use

Hazardous Materials Information: See Section 16.

Products covered in this document include: 193S, FG-0162, FG-062, FG-1333, FG-1633, FG-33321, FG-572, FG-633, VG-6005, VG-610, VGM-6005, VGY611

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2. Composition/information on ingredients

INGREDIENTS	CAS #	VAPOR PRESSURE	EXPOSURE LIMITS
1,2,4-trimethyl benzene	95-63-6	7.0@44.4 °C	A 25.0 ppm, O 25.0 ppm
1,6-hexamethylene diisocyanate	822-06-0	0.0@25.0 °C	A 5.0 ppb, O None
2-ethylhexyl acetate	103-09-3	0.5	A None, O None
4-chlorobenzotrifluoride	98-56-6	7.6@25.0 °C	D 20.0 ppm 8 & 12 hour TWA, A None, O None
Acetone	67-64-1	247.0@68.0 °F	A 750.0 ppm 15 min STEL, A 500.0 ppm, O 1000.0 ppm, D 500.0 ppm 8 & 12 hour TWA
Aliphatic polyisocyanate resin	28182-81-2	<0.0	S 0.5 mg/m3, A None, O None
Aromatic hydrocarbon	64742-95-6	10.0@25.0 °C	D 50.0 ppm, A None, O None
Butyl acetate	123-86-4	10.0	A 200.0 ppm 15 min STEL, A 150.0 ppm, O 150.0 ppm
Ethyl acetate	141-78-6	93.2@25.0 °C	A 400.0 ppm, O 400.0 ppm
Ethylene glycol monobutyl ether acetate	112-07-2	0.3	A 20.0 ppm, D 20.0 ppm 8 & 12 hour TWA, O None
Methyl acetate	79-20-9	171.3@68.0 °F	A 250.0 ppm 15 min STEL, A 200.0 ppm, O 200.0 ppm
Polyisocyanate	28182-81-2	None	A None, O None
Polyisocyanate based on hdi	NotAvail	None	A None, O None
Propylene glycol monomethyl ether acetate	108-65-6	3.8	D 30.0 ppm 15 min TWA, A None, O None
Reactive diluent e	NotAvail	None	A None, O None
T-butyl acetate	540-88-5	None	A 200.0 ppm, O 200.0 ppm

\*A=ACGIH, O=OSHA, D=DuPont, S=Suppliers. Limits are 8 hour TWA unless otherwise specified. Vapor pressure @ 20° C unless otherwise noted.

3. Hazards identification

Potential Health Effects:

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. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. If this product contains or is mixed with an isocyanate activator/hardener, the following health effects may apply: Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

**Ingestion:**

May result in gastrointestinal distress.

**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.

**Other Potential Health Effects in addition to those listed above:**

**1,6-hexamethylene diisocyanate**

Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough, which may be permanent; or permanent lung sensitization. This effect may be delayed for several hours after exposure. The following medical conditions may be aggravated by exposure: asthma, skin disorders, respiratory disorders. Overexposure may cause damage to any of the following organs/systems: lungs, skin. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin.

**4-chlorobenzotrifluoride**

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: skin. Prolonged or repeated exposure may cause damage to any of the following organs/systems: kidneys, liver, thyroid. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin. Ingestion may cause any of the following: gastrointestinal irritation. Eye contact may cause: permanent eye injury. Inhalation may cause: Causes stupor (central nervous system depression), respiratory tract irritation.

**Acetone**

The following medical conditions may be aggravated by exposure: lung disease, eye disease, skin disorders. Overexposure may cause damage to any of the following organs/systems: blood, central nervous system, eyes, kidneys, liver, respiratory system, skin.

**Aliphatic polyisocyanate resin**

Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough, which may be permanent; or permanent lung sensitization. This effect may be delayed for several hours after exposure. The following medical conditions may be aggravated by exposure: asthma, skin disorders, respiratory disorders. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin.

**Aromatic hydrocarbon**

The following medical conditions may be aggravated by exposure: skin disorders. Laboratory studies with rats have shown that petroleum distillates can 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 a significant increase of kidney damage or an increase in kidney or liver tumors.

**Butyl acetate**

May cause abnormal liver function. The following medical conditions may be aggravated by exposure: respiratory system. Tests for embryotoxic activity in animals has been inconclusive. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother.

**Ethyl acetate**

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: eyes, respiratory system, skin. Tests in laboratory animals have shown effects on any of the following organs/systems: blood, kidneys, liver.

**Ethylene glycol monobutyl ether acetate**

May destroy red blood cells. May cause abnormal kidney function. May cause temporary upper respiratory and/or lung irritation with cough, difficult breathing, or shortness of breath. The following medical conditions may be aggravated by exposure: central nervous system, gastrointestinal system, kidneys, liver, Dermatitis. Can be absorbed through the skin in harmful amounts. Overexposure may cause damage to any of the following organs/systems: blood, kidneys, liver. Ingestion may cause headache, nausea, vomiting, dizziness, and drowsiness.

**Polyisocyanate**

Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough, which may be permanent; or permanent lung sensitization. This effect may be delayed for several hours after exposure. The following medical conditions may be aggravated by exposure: asthma, skin disorders, respiratory disorders. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin.

**Propylene glycol monomethyl ether acetate**

Recurrent overexposure may result in liver and kidney injury.

**T-butyl acetate**

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, eyes, gastrointestinal system, liver, skin.

#### 4. First aid measures

##### First Aid Procedures:

##### Inhalation:

If affected by inhalation of vapor or spray mist, move to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing difficulty persists, or occurs later, consult a physician.

##### Ingestion:

In the unlikely event of ingestion, DO NOT INDUCE VOMITING. Call a physician immediately and have names of ingredients available.

##### Skin or eye contact:

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

#### 5. Fire-fighting measures

##### Flash Point (Closed Cup):

See Section 16 for exact values.

**Flammable Limits:** LFL 1.2 % UFL 11 %

##### Extinguishing Media:

Universal aqueous film-forming foam, carbon dioxide, dry chemical.

##### Fire Fighting Procedures:

Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to prevent pressure build-up.

##### Fire and Explosion Hazards:

For flammable liquids, vapor/air will ignite when an ignition source is present. In other cases, 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.

#### 6. Accidental release measures

##### Procedures for cleaning up spills or leaks:

Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. If material does not contain or is not mixed with an isocyanate activator/hardener: Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly. If the material contains, or is mixed with an isocyanate activator/hardener: Wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C), eye protection, gloves and protective clothing. Pour liquid decontamination solution over the spill and allow to sit at least 10 minutes. Typical decontamination solutions for isocyanate containing materials are: 20% Surfactant (Tergitol TMN 10) and 80% Water OR 0-10% Ammonia, 2-5% Detergent and Water (balance). Pressure can be generated. Do not seal waste containers for 48 hours to allow CO<sub>2</sub> to vent. After 48 hours, material may be sealed and disposed of properly.

##### Ecological information:

There is no data available on the product. The product should not be allowed to enter drains, water courses or the soil.

#### 7. Handling and storage

##### Precautions to be taken in handling and storing:

Observe label precautions. If combustible (flashpoint between 38-93 deg C or 100 - 200 deg F), keep away from heat, sparks and flame. If flammable (flashpoint less than 38 deg C or 100 deg F), also keep away from static discharges and other sources of ignition. If material is extremely flammable (flashpoint less than - 8 deg C or 20 deg F) or flammable, VAPORS MAY IGNITE EXPLOSIVELY OR CAUSE FLASH FIRE, respectively. Vapors may spread long distances. Prevent buildup of vapors. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 49 deg C or 120 deg F. If product is waterbased, do not freeze.

##### Other precautions:

If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Handling and processing operations should be conducted in accordance with best practices (e.g.NFPA-654).

## 8. Exposure controls/personal protection

### Ventilation:

Provide sufficient ventilation in volume and pattern to keep contaminants below applicable exposure limits.

### Respiratory protection:

Do not breathe vapors or mists. If this product contains isocyanates or is used with an isocyanate activator/hardener, wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C) during spray application (or brush and roll application in poorly ventilated areas) and until all vapors and spray mist are exhausted. For mixing and brush and roll application in well ventilated areas or, if the product does not contain or is not mixed with an isocyanate activator/hardener, a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH TC-23C) may be used until all vapors are exhausted. In addition, for spray application when product does not contain or is not mixed with an isocyanate activator/hardener, a particulate filter (NIOSH TC-84A) is needed with the organic vapor cartridges until all vapors and spray mist are exhausted. Follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area. Individuals with history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to vapor or spray mist if product contains or is mixed with isocyanate activators/hardeners.

### Protective equipment:

Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

### Skin and body protection:

Neoprene gloves and coveralls are recommended.

Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

## 9. Physical and chemical properties

Evaporation rate	Slower than Ether
Vapor pressure of principal solvent	97.2 hPa
Solubility of Solvent in Water	NIL
Vapour density	Heavier than air
Approx. Boiling Range (°C)	77 - 220 °C
Approx. Freezing Range (°C)	-84 °C
Density (g/l)	1,080 - 1,172
Specific Gravity	1.08 - 1.17
Percent Volatile By Volume	0.19 - 30.25
Percent Volatile By Weight	0.00 - 25.03
Percent Solids By Volume	69.75 - 99.82
Percent Solids By Weight	74.96 - 99.84
Appearance	liquid
Odour: characteristic of the Product	

## 10. Stability and reactivity

### Stability:

Stable

### Incompatibility (materials to avoid):

None reasonably foreseeable

### Hazardous decomposition products:

CO, CO<sub>2</sub>, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

### Hazardous Polymerization:

Will not occur.

### Sensitivity to Static Discharge:

For flammable materials (flashpoint less than 38 deg C or 100 deg F) and combustibles (flashpoint between 38- 93 deg C or 100-200 deg F) if heated above the flashpoint, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

### Sensitivity to Mechanical Impact:

None known.

Toxicity Test Type	Value	Time	Species	Source
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11. Toxicological information

Toxicity Test Type	Value	Time	Species	Source
1,2,4-trimethyl benzene				
Oral LD50	5,000 mg/kg		rat	RTECS
Inhalation LC50	18,000 mg/m <sup>3</sup>	4 h	rat	RTECS
1,6-hexamethylene diisocyanate				
Oral LD50	350 mg/kg		mouse	RTECS
Dermal LD50	570 mg/kg		rabbit	Supplier MSDS
Inhalation LC50	124 mg/m <sup>3</sup>	4 h	rat	RTECS
2-ethylhexyl acetate				
Oral LD50	5,890 mg/kg		rat	Supplier MSDS
Inhalation LC50	> 1,100 ppm	6 h	rat	Supplier MSDS
Inhalation LD50	> 1,100 ppm		rat	Supplier MSDS
4-chlorobenzotrifluoride				
Oral LD50	6,650 mg/kg		rat	Supplier MSDS
Dermal LD50	2,700 mg/kg		rabbit	Supplier MSDS
Inhalation LC50	4,479 ppm	4 h	rat	Supplier MSDS
Acetone				
Oral LD50	5,800 mg/kg		rat	RTECS
Dermal LD50	20 g/kg		rabbit	Supplier MSDS
Inhalation LC50	50.1 g/m <sup>3</sup>	8 h	rat	RTECS
Aliphatic polyisocyanate resin				
Oral LD50	1,000 mg/kg		rat	Supplier MSDS
Dermal LD50	5,000 mg/kg		rabbit	Supplier MSDS
Inhalation LC50	137 mg/m <sup>3</sup>	4 h	rat	Supplier MSDS
Aromatic hydrocarbon				
Oral LD50	> 5,000 mg/kg		rat	CCOHS
Dermal LD50	> 3,160 mg/kg		rat	CCOHS
Inhalation LD50	> 3,670 ppm	4 h	rat	Supplier MSDS
Butyl acetate				
Oral LD50	> 5,000 ml/kg		rat	Supplier MSDS
Dermal LD50	> 5,000 ml/kg		rabbit	Supplier MSDS
Inhalation LC50	> 6,335 ppm	4 h	rat	Supplier MSDS
Ethyl acetate				
Oral LD50	5,600 mg/kg		rat	Supplier MSDS
Dermal LD50	> 20 ml/kg		rabbit	Supplier MSDS
Inhalation LC50	29.4 mg/l	4 h	rat	Supplier MSDS
Ethylene glycol monobutyl ether acetate				
Oral LD50	2,400 mg/kg		rat	RTECS
Dermal LD50	1,500 mg/kg		rabbit	RTECS
Methyl acetate				
Oral LD50	> 5,000 mg/kg		rat	Supplier MSDS
Dermal LD50	> 5,000 mg/kg		rabbit	Supplier MSDS
Inhalation LC50	> 16,000 ppm	4 h	rat	Supplier MSDS
Propylene glycol monomethyl ether acetate				
Oral LD50	8.5 g/kg		Female Rat	Supplier MSDS
Dermal LD50	> 5 g/kg		rabbit	Supplier MSDS
Inhalation LC50	> 4,345 ppm	6 h	Male Rat	Supplier MSDS
T-butyl acetate				
Oral LD50	> 3,160 mg/kg	6 h	rat	Supplier MSDS
Inhalation LD50	> 6 mg/l	4 h	rat	Supplier MSDS

Key:

RTECS - Registry of Toxic Effects of Chemical Substances  
CCOHS - Canadian Center for Occupational Health and Safety  
Patty's - Patty's Industrial Hygiene and Toxicology, 3rd Edition

12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

Acute toxicity aquatic invertebrates

CAS-No.	Chemical Name	Species	Exposure time	Value	Type	Method
95-63-6	1,2,4-trimethyl benzene	Daphnia	48 h	6 mg/l	LC50	
822-06-0	1,6-hexamethylene diisocyanate	Ceriodaphnia dubia	48 h	89 mg/l	EC50	
67-64-1	Acetone	Daphnia	2 days	10 mg/l		
64742-95-6	Aromatic hydrocarbon	Daphnia	24 h	170 mg/l	EC50	
123-86-4	Butyl acetate	Ceriodaphnia dubia	2 days	72.8 mg/l	EC50	
112-07-2	Ethylene glycol monobutyl ether acetate	Daphnia	48 h	37 mg/l	EC50	
540-88-5	T-butyl acetate	Water flea	24 h	2,893 ppm		

Acute and extended toxicity of fishes

CAS-No.	Chemical Name	Species	Exposure time	Value	Type	Method
95-63-6	1,2,4-trimethyl benzene	Oncorhynchus mykiss (rainbow trout)	96 h	9.22 mg/l	EC50	
822-06-0	1,6-hexamethylene diisocyanate	Danio rerio (zebra fish)	96 h	82 mg/l	LC50	
98-56-6	4-chlorobenzotrifluoride	Pimephales promelas (fat-head minnow)	31 days	1 mg/l		
98-56-6	4-chlorobenzotrifluoride	Lepomis macrochirus (Bluegill sunfish)	4 days	12 mg/l		
98-56-6	4-chlorobenzotrifluoride	Oncorhynchus mykiss (rainbow trout)	4 days	14 mg/l		
67-64-1	Acetone	Carassius auratus (goldfish)	1 day	5,000 mg/l		
67-64-1	Acetone	Oncorhynchus mykiss (rainbow trout)	4 days	5,540 mg/l		
67-64-1	Acetone	Lepomis macrochirus (Bluegill sunfish)	4 days	8,300 mg/l		
64742-95-6	Aromatic hydrocarbon	Danio rerio (zebra fish)	96 h	10 mg/l	LC50	
123-86-4	Butyl acetate	Pimephales promelas (fat-head minnow)	4 days	18 mg/l	LC50	
123-86-4	Butyl acetate	Lepomis macrochirus (Bluegill sunfish)	4 days	100 mg/l		
141-78-6	Ethyl acetate	Pimephales promelas (fat-head minnow)	4 days	230 mg/l		
141-78-6	Ethyl acetate	Leuciscus idus (Golden orfe)	2 days	270 mg/l		
141-78-6	Ethyl acetate	Oncorhynchus mykiss (rainbow trout)	4 days	425 mg/l		
112-07-2	Ethylene glycol monobutyl ether acetate	Oncorhynchus mykiss (rainbow trout)	96 h	20 mg/l	LC50	
79-20-9	Methyl acetate	Pimephales promelas (fat-head minnow)	4 days	320 mg/l		
108-65-6	Propylene glycol monomethyl ether acetate	Pimephales promelas (fat-head minnow)	4 days	161 mg/l		
540-88-5	T-butyl acetate	Pimephales promelas (fat-head minnow)	96 h	327 ppm		

Toxicity with aquatic plants

CAS-No.	Chemical Name	Species	Exposure time	Value	Type	Method
98-56-6	4-chlorobenzotrifluoride	Daphnia	2 days	4 mg/l		
98-56-6	4-chlorobenzotrifluoride	green algae (type not specified)	3 days	500 mg/l		
28182-81-2	Aliphatic polyisocyanate resin	Desmodesmus subspicatus (green algae)	72 h	1,000 mg/l	EC50	
64742-95-6	Aromatic hydrocarbon	Algae	72 h	10 mg/l	EC50	
141-78-6	Ethyl acetate	Daphnia	2 days	230 mg/l		
112-07-2	Ethylene glycol monobutyl ether acetate	green algae (type not specified)	72 h	500 mg/l	EC50	
108-65-6	Propylene glycol monomethyl ether acetate	Daphnia	2 days	408 mg/l		

**Mobility**

No information available.

**13. Disposal considerations**

**Provincial Waste Classification:**

Check appropriate provincial and local waste disposal regulations for proper classifications.

**Waste Disposal Method:**

Do not allow material to contaminate ground water systems. Incinerate or otherwise dispose of waste material in accordance with Federal, State, Provincial, and local requirements. Do not incinerate in closed containers. Send to a licensed waste management company.

**14. Transport information**

**FG-572**

- Not classified as dangerous in the meaning of transport regulations.

**193S, FG-0162, FG-062, FG-1633, FG-33321, VG-610, VGY611**

- TDG Shipping Name: PAINT RELATED MATERIAL
- Hazard class: 3
- UN number: 1263
- Packing group: II

**FG-1333, FG-633, VG-6005, VGM-6005**

- TDG Shipping Name: PAINT RELATED MATERIAL
- Hazard class: 3
- UN number: 1263
- Packing group: III

**15. Regulatory information**

This product has been classified according to the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

**TSCA Status:**

Contact product information number for regulatory status of individual products.

**CEPA Status:**

Contact product information number for regulatory status of individual products.

**OCI:**

Contact product information number for regulatory status of individual products.

**WHMIS Classification:**

193S, FG-0162, FG-062, FG-1633, VG-610, VGY611

- Class B Division 2
- Class D Division 1 Subdivision A
- Class D Division 2 Subdivision A 56
- Class D Division 2 Subdivision B 60
- Class D Division 2 Subdivision B 61

**FG-33321**

- Class B Division 2
- Class D Division 2 Subdivision B 60

**FG-1333, FG-633, VG-6005, VGM-6005**

- Class B Division 3
- Class D Division 1 Subdivision A
- Class D Division 2 Subdivision A 56
- Class D Division 2 Subdivision B 60
- Class D Division 2 Subdivision B 61

**FG-572**

- Class D Division 1 Subdivision A
- Class D Division 2 Subdivision A 56
- Class D Division 2 Subdivision B 60
- Class D Division 2 Subdivision B 61

**16. Other information**

**193S™** 1,6-hexamethylene diisocyanate(0.1 - 1.0%), Aliphatic polyisocyanate resin(60 - 100%), Butyl acetate(5 - 10%), Ethyl acetate(10 - 30%), Ethylene glycol monobutyl ether acetate(3 - 7%) **DENSITY: 1,080.00 WT PCT SOLIDS: 74.99 VOL PCT SOLIDS: 70.05 SOLVENT DENSITY: 901.92 VOC LE: 270.0 VOC AP: 270.0 FLASH POINT: -7 °C to below 23 °C H: 2 F: 3 R: 1 OSHA STORAGE: IB PHOTOCHEMICALLY REACTIVE: NO**

**FG-0162™** 2-ethylhexyl acetate(3 - 7%), Acetone(1 - 5%), Aliphatic polyisocyanate resin(60 - 100%), Butyl acetate(10 - 30%), Propylene glycol monomethyl ether acetate(7 - 13%) **DENSITY: 1,088.00 WT PCT SOLIDS: 75.00 VOL PCT SOLIDS: 69.75 SOLVENT DENSITY: 899.04 VOC LE: 261.0 VOC AP: 255.6 FLASH POINT: -7 °C to below 23 °C H: 3 F: 3 R: 1 OSHA STORAGE: IB PHOTOCHEMICALLY REACTIVE: NO**

**FG-062™** 2-ethylhexyl acetate(3 - 7%), Aliphatic polyisocyanate resin(60 - 100%), Butyl acetate(10 - 30%), Propylene glycol monomethyl ether acetate(7 - 13%) **DENSITY: 1,090.00 WT PCT SOLIDS: 75.00 VOL PCT SOLIDS: 69.90 SOLVENT DENSITY: 905.27 VOC LE: 272.5 VOC AP: 272.5 FLASH POINT: -7 °C to below 23 °C H: 3 F: 3 R: 1 OSHA STORAGE: IB PHOTOCHEMICALLY REACTIVE: NO**

**FG-1333™** 1,6-hexamethylene diisocyanate(0.1 - 1.0%), 4-chlorobenzotrifluoride(1 - 5%), Aliphatic polyisocyanate resin(60 - 100%), Methyl acetate(1 - 5%) **DENSITY: 1,154.00 WT PCT SOLIDS: 95.00 VOL PCT SOLIDS: 94.76 SOLVENT DENSITY: 1,098.45 VOC LE: 0.7 VOC AP: 0.6 FLASH POINT: 60 °C to below 93 °C H: 2 F: 2 R: 1 OSHA STORAGE: IIIA PHOTOCHEMICALLY REACTIVE: NO**

**FG-1633™** 1,6-hexamethylene diisocyanate(0.1 - 1.0%), Aliphatic polyisocyanate resin(60 - 100%), Butyl acetate(1 - 5%), T-butyl acetate(1 - 5%) **DENSITY: 1,137.00 WT PCT SOLIDS: 95.00 VOL PCT SOLIDS: 93.47 SOLVENT DENSITY: 870.28 VOC LE: 56.8 VOC AP: 56.8 VOC LE (TBAC): 29.6 VOC AP (TBAC): 28.5 FLASH POINT: -7 °C to below 23 °C H: 2 F: 3 R: 1 OSHA STORAGE: IB PHOTOCHEMICALLY REACTIVE: NO**

**FG-33321™** 4-chlorobenzotrifluoride(1 - 5%), Methyl acetate(1 - 5%), Polyisocyanate(60 - 100%) **DENSITY: 1,172.00 WT PCT SOLIDS: 96.04 VOL PCT SOLIDS: 95.91 SOLVENT DENSITY: 1,131.89 VOC LE: 0.5 VOC AP: 0.5 FLASH POINT: -7 °C to below 23 °C H: 1 F: 3 R: 0 OSHA STORAGE: IB PHOTOCHEMICALLY REACTIVE: NO**

**FG-572™** 1,6-hexamethylene diisocyanate(0.1 - 1.0%), Aliphatic polyisocyanate resin(60 - 100%), Polyisocyanate based on hdi(1 - 5%), Reactive diluent e(1 - 5%) **DENSITY: 1,161.00 WT PCT SOLIDS: 99.84 VOL PCT SOLIDS: 99.82 SOLVENT DENSITY: 936.76 VOC LE: 1.8 VOC AP: 1.8 FLASH POINT: Above 93 °C H: 3 F: 1 R: 1 OSHA STORAGE: IIIB PHOTOCHEMICALLY REACTIVE: NO**



**FG-633™** 1,6-hexamethylene diisocyanate(0.1 - 1.0%), Aliphatic polyisocyanate resin(60 - 100%), Butyl acetate(3 - 7%) **DENSITY: 1,138.00 WT PCT SOLIDS: 95.00 VOL PCT SOLIDS: 93.54 SOLVENT DENSITY: 880.10 VOC LE: 56.8 VOC AP: 56.8 FLASH POINT: 38 °C to below 60 °C H: 2 F: 2 R: 1 OSHA STORAGE: II PHOTOCHEMICALLY REACTIVE: NO**

**VG-6005™** 1,2,4-trimethyl benzene(1 - 5%), 1,6-hexamethylene diisocyanate(0.1 - 1.0%), Aliphatic polyisocyanate resin(60 - 100%), Aromatic hydrocarbon(1 - 5%), Butyl acetate(3 - 7%) **DENSITY: 1,120.00 WT PCT SOLIDS: 90.00 VOL PCT SOLIDS: 87.23 SOLVENT DENSITY: 874.11 VOC LE: 111.9 VOC AP: 111.9 FLASH POINT: 38 °C to below 60 °C H: 2 F: 2 R: 1 OSHA STORAGE: II PHOTOCHEMICALLY REACTIVE: YES**

**VG-610™** Aliphatic polyisocyanate resin(60 - 100%), Butyl acetate(5 - 10%), Ethyl acetate(10 - 30%), Ethylene glycol monobutyl ether acetate(3 - 7%) **DENSITY: 1,089.00 WT PCT SOLIDS: 74.96 VOL PCT SOLIDS: 69.77 SOLVENT DENSITY: 901.92 VOC LE: 272.6 VOC AP: 272.6 FLASH POINT: -7 °C to below 23 °C H: 3 F: 3 R: 1 OSHA STORAGE: IB PHOTOCHEMICALLY REACTIVE: NO**

**VGM-6005™** 1,2,4-trimethyl benzene(1 - 5%), 1,6-hexamethylene diisocyanate(0.1 - 1.0%), Aliphatic polyisocyanate resin(60 - 100%), Aromatic hydrocarbon(1 - 5%), Butyl acetate(3 - 7%) **DENSITY: 1,120.00 WT PCT SOLIDS: 90.00 VOL PCT SOLIDS: 87.23 SOLVENT DENSITY: 874.11 VOC LE: 111.9 VOC AP: 111.9 FLASH POINT: 38 °C to below 60 °C H: 2 F: 2 R: 1 OSHA STORAGE: II PHOTOCHEMICALLY REACTIVE: YES**

**VGY611™** Aliphatic polyisocyanate resin(60 - 100%), Butyl acetate(5 - 10%), Ethyl acetate(10 - 30%), Ethylene glycol monobutyl ether acetate(3 - 7%) **DENSITY: 1,089.00 WT PCT SOLIDS: 74.99 VOL PCT SOLIDS: 69.80 SOLVENT DENSITY: 901.92 VOC LE: 272.4 VOC AP: 272.4 FLASH POINT: -7 °C to below 23 °C H: 3 F: 3 R: 1 OSHA STORAGE: IB PHOTOCHEMICALLY REACTIVE: NO**

**Footnotes:**

**ACGIH** American Conference of Governmental Industrial Hygienists.

**IARC** International Agency for Research on Cancer.

**NTP** National Toxicology Program.

**OSHA** Occupational Safety and Health Administration.

**STEL** Short term exposure limit.

**TWA** Time-weighted average.

**DENSITY** Density g/l

**SOLVENT DENSITY** (g/l)

**VOC LE** Theoretical VOC calculated less exempt solvents and water (g/l)

**VOC AP** Theoretical VOC calculated as packaged (g/l)

**PNOR** Particles not otherwise regulated.

**PNOC** Particles not otherwise classified.

\* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture. TBAC is not universally recognized as an exempt solvent.

Users should consult the applicable regulations for their region.

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**Notice:**

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**MSDS prepared by:** DuPont Performance Coatings Regulatory Affairs