Z 094 212 705

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Mr. Lee Schmudde	
Street & Number P.O. Box 10,000	
Post Office, State, & ZIP Code Lake Buena Vista, FL 32830-1000	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 12/6/99 Walt Disney World Resort Unregulated Fugitive VOC Coating Activity	

PS Form **3800**, April 1995

Is your **RETURN ADDRESS** completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Lee Schmudde
Vice President, Legal
Walt Disney World Co.
P.O. Box 10,000
Lake Buena Vista, Florida
32830-1000

4a. Article Number
Z 094 212 705

4b. Service Type

- ☐ Registered
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- ☐ Express Mail
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- ☐ Return Receipt for Merchandise
- ☐ COD

7. Date of Delivery

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FULFILLMENT

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

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PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

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PARTMENT OF ENVIRONMENTAL PROTECTION
VISION OF AIR RESOURCES MANAGEMENT
BUREAU OF AIR REGULATION - TITLE V
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

RECEIVED
DEC 10 1999
BUREAU OF AIR REGULATION

M& 5505

Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

December 3, 1999

CERTIFIED MAIL – Return Receipt Requested

Mr. Lee Schmudde
Vice President, Legal
Walt Disney World Co.
P.O. Box 10,000
Lake Buena Vista, Florida 32830-1000

Re: Walt Disney World Resort
Unregulated Fugitive VOC Coating Activity at the Disney-MGM Studios

Dear Mr. Schmudde:

The Department has evaluated the submittal received on November 29, 1999, regarding the above referenced proposed fugitive VOC emissions activities at the Disney-MGM Studios. Based on the current Title V Permit, this activity is sanctioned under the "unregulated" status of "Facility-wide Fugitive VOC Emissions" in Appendix U-1. Therefore, no further permitting action is required.

Thank you for allowing the Department to review your proposal and to formulate a response. If there are any questions, please call Mr. Bruce Mitchell at 850/921-9506 or write to me at the above letterhead address.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/rbm

cc: Mr. Len Kozlov, CD (Interoffice mail)
Mr. Bob Beaver, P.E., Walt Disney World Co.
Mr. Richard Bumar, Contact, Walt Disney World Co.
Mr. Scott Sheplak, BAR (hand delivered)

Bruce

Walt Disney World Co.

RECEIVED

NOV 29 1999

BUREAU OF AIR REGULATION

November 19, 1999

Mr. Clair Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Proposed exemption - Temporary Painting Operation

Dear Mr. Fancy:

This letter proposes a conditional exemption from permitting for a temporary painting operation which will be located in the Disney-MGM Studios at the Walt Disney World Resort complex. For approximately four weeks, starting in January 2000, the Epic Stunt Theater at the Disney-MGM Studios will be refurbished. The work will include surface preparation and spray painting of the show props, theater and surrounding structures. In order to control humidity and temperature during these activities, and to keep overspray/fugitive emissions from impacting the theme park guests, an enclosure will be erected around the entire structure. Since the enclosure will be ventilated, any VOC or particulate emissions will be directed through the exhaust duct of the enclosure.

The planned work will, as described above, involve the use of spray-applied coating materials and mastics. At this time, two manufacturer's coating systems are being considered as options: Dupont and PPG. Although the same approximate amount of materials will be used for each option, the potential VOC emissions are different, due to the differences in each manufacturer's formulations. The Dupont option has the potential to emit 4.6 tons of VOCs during the four week period. The PPG option has the potential to emit 3.8 tons of VOCs. Please refer to Attachment A for the supporting documentation that verify these amounts. Attachment B shows the location of the proposed emissions unit. Also included are the professional engineer's certification and the responsible official's statement in Attachment C.

Since the potential emissions from the operation are not significant, it is requested that the units be granted a conditional exemption from construction permitting requirements. Bruce Mitchell and I have discussed this project and he concluded that this type of operation should be considered a source of fugitive VOC emissions, and therefore, a conditional exemption is appropriate.

If you have any questions or need any further information, please call me at 407-827-2748.

Sincerely,

Rich Bumar

Rich Bumar
Environmental Control Representative
Environmental Control Department

Enclosure

cc: Bob Beaver
Leonard Kozlov
Bruce Mitchell
Armando Rodriguez (w/o enclosure)
Lee Schmudde (w/o enclosure)
Scott Sheplak (w/o enclosure)

Walt Disney World Co.

RECEIVED

NOV 29 1999

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Environmental Control Representative
Environmental Control Department

Enclosure

cc: Bob Beaver
Leonard Kozlov
Bruce Mitchell
Armando Rodriguez (w/o enclosure)
Lee Schmudde (w/o enclosure)
Scott Sheplak (w/o enclosure)

ATTACHMENT A

EMISSIONS CALCULATIONS
MATERIAL SAFETY DATA SHEETS

Attachment A

Epic Stunt Theater Rehab VOC emissions estimate

						Potential VOC Emissions	
MSDS No.	Class	Manufacturer	Material Name	Projected Usage, gal	lb VOC/gal	Total lb	Total tons
1	Epoxy Mastic	Dupont	25P High solids epoxy mastic (HPC 7)	2300	2.20	5,060	2.53
2	Acrylic Polyurethane	Dupont	Imron 333 (HPC 4)	200	4.10	820	0.41
3	Acrylic Latex	Dupont	Color Wheel 100 Line Optima Super Acrylic	150	0.00	0	0.00
4	Epoxy reducer	Dupont	Y-32401 Reducer (HPC 9)	280	7.80	2,184	1.09
11	Activator	Dupont	25P Activator: Imron VGY 511 (HPC 5)	230	5.00	1,150	0.58
11	Activator	Dupont	333 Activator Imron VG 6005 (HPC 5)	20	0.90	18	0.01
			Totals	**3180 gallons**		**9,232**	**4.6**

						Potential VOC Emissions	
MSDS No.	Class	Manufacturer	Material Name	Projected Usage, gal	lb VOC/gal	Total lb	Total tons
5	Epoxy Mastic	PPG	95-248 Rapid Coat Epoxy Mastic	1150	2.90	3,335	1.67
6	Epoxy Mastic	PPG	95-249 Rapid Coat Epoxy Mastic	1150	1.50	1,725	0.86
7	Acrylic Polyurethane	PPG	95-8600 Urethane Enamel	100	3.25	325	0.16
8	Acrylic Polyurethane	PPG	95-869 Urethane Enamel	100	2.21	221	0.11
9	Acrylic Latex	PPG	72-110 Sun Proof Line Acrylic	150	0.00	0	0.00
10	Epoxy thinner	PPG	97-725 Epoxy Thinner	280	7.26	2,033	1.02
			Totals	**2930 gallons**		**7,639**	**3.8**

MSDS HPC 7
EPOXY PRIMERS, ENAMELS & ACTIVATORS
HIGH PERFORMANCE COATINGS
January 1, 1998

MSDS # 100215

DUPONT®

MATERIAL SAFETY DATA SHEET
EPOXY PRIMERS, ENAMELS & ACTIVATORS

Section I - Manufacturer

Manufacturer:
DuPont Co.
Automotive
Wilmington, Delaware 19898
Telephone:
Product information (800)441-7515
Medical emergency (800) 441-3637
Transportation emergency (800) 424-9300 (CHEMTREC)

Product: *Epoxy Primers, Enamels, & Activators*
D.O.T Hazard Class: Flammable; Combustible. See Section X for specific data.
Shipping Name: Paint UN 1263 for Flammable items.

Section II - Hazardous Ingredients (See Section X)

Ingredients	*CAS No.*	*Vapor Pressure (20°C. mm Hg)*	*Exposure Limits* *
Acrylic polymer-A	26010-51-5	None	None-A,O
Acrylic polymer-B	110972-58-2	None	None-A,O
Aliphatic amine	Not Available	None	None-A,O
Aluminum	7429-90-5	None	10 mg/m³ -A 15 mg/m³ -O 5 mg/m³ -O Resp
Amidoamine	Not Available	None	None-A,O
Amidoamine resin-A	68443-08-3	*Unknown*	*None-A,O*
Amidoamine resin-B	Not Available	Unknown	None-A,O
Amine salt of polycarboxylic acid	Not Available	Unknown	None-A,O
Amorphous silica	7631-86-9	None	0.2 mg/m³-A Resp 15 mg/m³-O 5 mg/m³-O Resp 1 mg/m³-A 15 min(STEL)
Aromatic hydrocarbon-A	64742-95-6	10 @ 25C	None-A,O
Aromatic hydrocarbon-B	64742-94-5	*10.0*	*None-A,O*
Barium metaborate	Not Available	None	10 mg/m³ -A None-O
Barium sulfate	7727-43-7	None	10 mg/m³ -A 10 mg/m³ -O 5 mg/m³ -O Resp
Bisphenol -epichlorohydrin polymer-A	25036-25-3	None	None-A,O
Bisphenol-epichlorohydrin type polymer-B	25068-38-6	None	None-A,O
Butyl acetate	123-86-4	*8.0*	150 ppm - A,O 200 ppm -A,O 15 min(STEL)
Calcium barium phosphosilicate	102819-81-8	None	None-A,O
Calcium carbonate	471-34-1	None	10 mg/m³ -A 15 mg/m³ -O 5 mg/m³-O Resp
Calcium phosphosilicate	Not Available	None	None-A,O
Carbon black	1333-86-4	None	3.5 mg/m³ -A,O 0.5 mg/m³-D
Cumene	98-82-8	3.7	50 ppm-A,O Skin
Diacetone alcohol	123-42-2	1.1@ 200C	50 ppm-A,O
Diatomaceous earth	7631-86-9	None	10 mg/m³-A 1 mg/m³-D None-O
Diisobutyl ketone	108-83-8	1.7	25 ppm-A 50 ppm-O
Diisononyl phthalate	28553-12-0	None	None-A,O
Ethyl acetate	141-78-6	76.0	400 ppm-A,O
Ethylene glycol mono butyl ether	111-76-2	0.6	25 ppm-A Skin 50 ppm-O Skin 10 ppm-D Skin
Ethylene glycol monobutyl ether acetate	112-07-2	0.3	20 ppm-D Skin *None-A,O*
Glycidyl ester of tert-carboxylic acid	Not Available	1.0	None-A,O
Hydrous magnesium silicate	14807-96-6	None	2 mg/m³- A Resp 0.5 mg/m³-D None-O
Iron oxide	1309-37-1	None	10 mg/m³ -A None-O
Isoindolinone pigment	36888-99-0	None	10 mg/m³ -A 15 mg/m³ -O *5 mg/m³-O Resp*
Isopropyl alcohol	67-63-0	33.0	400 ppm-A,O 500 ppm-A 15 min(STEL) 400 ppm-D 8&12 hr
Kaolin	1332-58-7	None	10 mg/m³ -A None-O
Medium mineral spirits	64742-88-7	10	100 ppm-D None-A,O
Methyl amyl ketone	110-43-0	2.2	50 ppm-A *100 ppm-O*
Methyl ethyl ketone	78-93-3	71.0	200 ppm-A,O 300 ppm-A 15 min(STEL) 200 ppm-D 8&12 hr TWA 300 ppm-D 15 min(STEL)
Methyl isobutyl carbinol	108-11-2	2.2	25 ppm-A,O Skin 40 ppm-A,O 15 min(STEL)
Methyl isobutyl ketone	108-10-1	15.0	50 ppm - A 100 ppm-O 75 ppm - A 15 min(STEL)
Mica	12001-26-2	None	3 mg/m³-A,O Resp
Monoazo pigment	12236-62-3	None	10 mg/m³ -A None-O
n-Aminoethylpoperazine	140-31-8	None	None-A,O

n-Butyl alcohol			
	71-36-3	5.6	50 ppm-A Ceiling Skin 100 ppm-O 25 ppm-D 50 ppm D- 15 min TWA
Naphthalene			
	91-20-3	1 0@52.6C	10 ppm-A,O
Organoclay			
	68911-87-5	None	None - A,O
Organophillic clay			
	71011-26-2	None	None-A,O
Phenolic polymer			
	9003-35-4	None	None-A,O
Phthalocyanine blue			
	147-14-8	None	10 mg/m³ -A 15 mg/m³ -O 5 mg/m³-O Resp
Polyamide resin			
	68410-23-1	None	None-A,O
Propylene carbonate			
	108-32-7	None	None-A,O
Propylene glycol methyl ether			
	107-98-2	10.9	100 ppm-A 150 ppm-A 15 min(STEL) None-O
Propylene glycol monomethyl ether acetate			
	108-65-6	3.7	None-A, O 10 ppm-D
Quartz/crystalline silica			
	14808-60-7	None	0.1 mg/m³ -A, O Resp
Quinacridone pigment			
	1047-16-1	None	10 mg/m³ -A 15 mg/m³ -O 5 mg/m³ O Resp
Silicone dioxide			
	14808-60-7	None	10 mg/m³-A None-O
Tetrahydrofuran			
	109-99-9	160 @ 25 C	200 ppm-A,O 250 ppm-A,O 15 min(STEL) 25 ppm-D 8&12 hr. TWA 75 ppm-D 15 TWA
Titanium dioxide			
	13463-67-7	None	10 mg/m³ -A 15 mg/m³ -O 10 mg/m³ - O
Toluene			
	108-88-3	36.7	50 ppm-A Skin 200 ppm-O 300 ppm-O Ceiling 500 ppm-O 10 min MAX 50 ppm-D 8&12 hr TWA
Urea formaldehyde resin			
	Not Available	None	None-A,O
Xylene			
	1330-20-7	7 @ 25C	100 ppm-A,O 150 ppm-A,O 15 min(STEL) 150 ppm-A(STEL) 100 ppm-D 8&12hr 150 ppm 15 min TWA
Zinc oxide			
	1314-13-2	None	10 mg/m³ -A,O Total dust 5 mg/m³ -O Resp
1,2,4-trimethyl benzene			
	95-63-6	7 @ 44.4C	25 ppm-A,O
2-Ethylhexyl glycidyl ether			
	Not Available	None	None-A,C
2,4,6-Dimethylaminomethyl phenol			
	Not Available	Unknown	None-A,O
4-Nonyl hydroxybenzene			
	25154-52-3	Unknown	None-A,O

A = ACGIH TLV; O = OSHA; D = DuPont internal limit; S = Supplier Furnished limit; STEL = Short Term Exposure Limit; C = Ceiling.

Section III - Physical Data

Evaporation rate: Less than ether
Vapor Density: Heavier than air
Solubility in water: Miscible
Percent volatile by volume: 1.0% - 64.2%
Percent volatile by weight: 0.7% - 64.2%
Boiling range: 65.5 deg C-296.0 deg C;149.9 deg F-564.8 deg F
Gallon weight: 7.34 - 13.59 lb/gallon

Section IV - Fire and Explosion Data

Flash point (closed cup): See Section X for exact values.
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: Gastrointestinal distress. In the unlikely event of ingestion, call a physician immediately and have the 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:

Acrylic polymer-B Contact may cause skin irritation with discomfort or rash. May cause eye irritation with discomfort, tearing, or blurred vision. **Amidoamine** Contact may cause skin irritation with discomfort or rash. Causes eye corrosion and permanent injury. **Amidoamine resin-A, B** Contact may cause skin irritation with discomfort or rash. Contact may cause skin burns. Causes eye corrosion and permanent injury. Causes severe eye irritation. **Aromatic hydrocarbon-A, B** 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. **Bisphenol a/epichlorohydrin polymer-A** Repeated exposure may cause allergic skin rash, itching, swelling. Has shown mutagenic activity in laboratory cell culture tests. **Bisphenol-epichlorohydrin type polymer-B** Repeated exposure may cause allergic skin rash, itching, swelling. **Butyl acetate** May cause abnormal liver function. Tests for embryotoxic activity in animals has been inconclusive. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother. **Carbon black** Is an IARC, NTP or OSHA carcinogen. **Cumene** Can be absorbed through the skin in harmful amounts. Liquid splashes in the eye may result in chemical burns. Recurrent overexposure may result in liver and kidney injury. Tests for mutagenic activity in bacterial or mammalian cell cultures have been inconclusive **Diacetone alcohol** Recurrent overexposure may result in liver and kidney injury. **Diatomaceous earth** Repeated and prolonged overexposure may lead to chronic lung disease. **Diisobutyl ketone** Extremely high oral and inhalation doses in laboratory animals have shown weight changes in various organs such as the

brain, heart and adrenal gland. In addition liver and kidney injury were observed at the extremely high inhalation level. In another inhalation study there was a slight depression in the white blood cell count. Repeated exposure may cause allergic skin rash, itching, swelling. **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. **Ethylene glycol monobutyl ether acetate** Can be absorbed through the skin in harmful amounts. May destroy red blood cells. May cause abnormal kidney function. **Ethylene glycol monobutylether** Can be absorbed through the skin in harmful amounts. May cause injury to the kidneys, liver, blood and/or bone marrow. Repeated overexposure may result in damage to the blood. Eye contact may cause corneal injury. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother. **Glycidyl ester of tert carboxylic acid** Repeated exposure may cause allergic skin rash, itching, swelling. May cause eye irritation with discomfort, tearing, or blurred vision. Tests for mutagenic activity in bacterial or mammalian cell cultures have been inconclusive. High doses in laboratory animals have shown non specific effects such as irritation, weight loss, moderate blood changes. Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. **Hydrous magnesium silicate** Repeated and prolonged overexposure to talc may lead to typical x-ray changes and chronic lung. **Isopropyl alcohol** Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. **Medium mineral spirits** 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. **Methyl amyl ketone** Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. **Methyl ethyl ketone** High concentrations have caused embryotoxic effects in laboratory animals. Methyl ethyl ketone 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. **Methyl isobutyl carbinol** Male rats exposed to very high airborne levels showed an increase in kidney weights. These effects were not seen in male rats exposed to lower concentrations, or in female rats at the same level. Liquid splashes in the eye may result in chemical burns. Extremely high concentrations have caused blood changes and weakness in laboratory animals. **Methyl isobutyl ketone** Recurrent overexposure may result in liver and kidney injury. Individuals with preexisting diseases of the central nervous system or lungs may have increased susceptibility to the toxicity of excessive exposures. *Mica Repeated and prolonged overexposure* may lead to chronic lung disease. **N-butyl alcohol** Liquid splashes in the eye may result in chemical burns. May cause abnormal blood forming function with anemia. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts. **Naphthalene** Recurrent overexposure may result in liver and kidney injury. Individuals with preexisting diseases of the liver or kidneys may have increased susceptibility to the toxicity of excessive exposures. **Propylene glycol methyl ether** Overexposure may lead to kidney, liver and lung damage. Individuals with preexisting diseases of the liver may have increased susceptibility to the toxicity of excessive exposures. Can be absorbed through the skin in harmful amounts. **Propylene glycol monomethyl ether acetate** May cause moderate eye burning. Recurrent overexposure may result in liver and kidney injury. **Quartz-crystalline silica** Repeated overexposure to crystalline silica may lead to typical x-ray changes and chronic lung disease. Is an IARC, NTP or OSHA carcinogen. **WARNING:** This chemical is known to the State of California to cause cancer. **Tetrahydrofuran** May cause abnormal liver function. May cause temporary upper respiratory and/or lung irritation with cough, difficult breathing, or shortness of breath. Liquid splashes in the eye may result in chemical burns. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother. Tests in some laboratory animals demonstrate carcinogenic activity. **Titanium dioxide** In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m3 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/m3 level are not relevant to the workplace. **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. **WARNING:** This chemical is known to the State of California to cause birth defects or other reproductive harm. Chromosomal changes in the circulating blood of exposed work been reported. The significance of these reports is unclear of exposure to other substances. Individuals with preexisting diseases of the central nervous system may have increased susceptibility to the toxicity of excessive exposures. **Urea formaldehyde resin** This chemical is a formaldehyde donor. Formaldehyde is an IARC, NTP or OSHA carcinogen and has shown mutagenic activity in laboratory cell culture tests. 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. **Xylene** Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts. Individuals with pre-existing disease of the central nervous system, kidneys, liver, cardiovascular system, lungs, or bone marrow may have increased susceptibility to the toxicity of excessive exposures. **Zinc Oxide** May cause abnormal liver function. **2,4,6-dimethylaminomethyl phenol** Overexposure may cause eye, nose and throat irritation. Repeated or prolonged contact may cause skin irritation with discomfort and dermatitis. Causes eye corrosion and permanent injury. Contact may cause skin burns. Repeated exposure may cause allergic skin rash, itching, swelling. Can be absorbed through the skin in harmful amounts.

Section Vi - Reactivity Data

Stability: Stable
Incompatibility (materials to avoid): None reasonably foreseeable.
Hazardous decomposition products: CO, CO_2, smoke, oxides of metals shown 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, approved by NIOSH (TC-23C). Confine and remove with inert absorbent. If the material has been activated with an isocyanate, wear a positive-pressure supplied-air respirator NIOSH (TC-19C).
Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state, and local

nonyl hydroxybenzene (6. 35%)
GAL WT: 10.37 WT PCT SOLIDS: 99.32 VOL PCT SOLIDS: 98.92 SOLVENT DENSITY: 6.53 VOC LE: 0.1 VOC AP: 0.1 H: 3 F: 1 R: 0 FLASH PT: ABOVE 200 F (CC) OSHA STORAGE: IIIB

VGY 8339 isopropyl alcohol (17.17%), methyl ethyl ketone (2.98%*), methyl isobutyl carbinol (7.17%), n-butyl alcohol (4.53%*), polyamide resin (38.68%), propylene glycol methyl ether (20.38%), toluene (4.34%*) , xylene (4-5%*)
GAL WT: 7.34 WT PCT SOLIDS: 38.68 VOL PCT SOLIDS: 35.77 SOLVENT DENSITY: 7.01 VOC LE: 4.5 VOC AP: 4.5 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

525- 333 amidoamine (8.58%), barium sulfate (24.49%), bisphenol-epichlorohydrin type polymer-B (6.47%), calcium barium phosphosilicate (10.20%*), diisobutyl ketone (7.44%), ethylene glycol monobutylether (8.30%*), hydrous magnesium silicate (9.48%), kaolin (10.81%), methyl amyl ketone (5.14%), methyl ethyl ketone (5.82%*), 2,4,6-dimethylaminomethyl phenol (1.20%)
GAL WT: 12.35 WT PCT SOLIDS: 72.92 VOL PCT SOLIDS: 51.79 SOLVENT DENSITY: 6.94 VOC LE: 3.3 VOC AP: 3.3 H: 3 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

525- 2420 bisphenol-epichlorohydrin type polymer-B (50.37%), quartz-crystalline silica (37.36%), 2-ethylhexyl glycidyl ether (4.83%), 4-nonyl hydroxybenzene (5.03%)
GAL WT: 11.86 WT PCT SOLIDS: 99.00 VOL PCT SOLIDS: 98.22 SOLVENT DENSITY: 6.66 VOC LE: 0.1 VOC AP: 0.1 H: 3 F: 1 R: 0 FLASH PT: ABOVE 200 F (CC) OSHA STORAGE:

525-A8601 aromatic hydrocarbon-B (19.27%), bisphenol-epichlorohydrin type polymer-B (50.95%), hydrous magnesium si licate (24.47%), naphthalene (0-2%*), 1,2,4-trimethyl benzene (0-2%*)
GAL WT: 10.45 WT PCT SOLIDS: 76.82 VOL PCT SOLIDS: 67.22 SOLVENT DENSITY: 7.39 VOC LE: 2.4 VOC AP: 2.4 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

525-A8603 aromatic hydrocarbon-B (22.52%), bisphenol-epichlorohydrin type polymer-B (48.80%), diatomaceous earth (5.74%), hydrous magnesium silicate (9.18%), naphthalene (0-3%*), quartz-crystalline silica (8.61%), 1,2,4-trimethyl benzene (0-3%*)
GAL WT: 10.11 WT PCT SOLIDS: 73.11 VOL PCT SOLIDS: 63.22 SOLVENT DENSITY: 7.39 VOC LE: 2.7 VOC AP: 2.7 H: 3 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

525-B8601 amidoamine resin-B (1.75%*), hydrous magnesium silicate (8.06%), n-butyl alcohol (25.85%*), polyamide resin (16.43%), silicon dioxide (5.86%), titanium dioxide (39.89%)
GAL WT: 12.40 WT PCT SOLIDS: 72.83 VOL PCT SOLIDS: 50.03 SOLVENT DENSITY: 6.74 VOC LE: 3.4 VOC AP: 3.4 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

525-B8603 amidoamine resin (1.68%*), hydrous magnesium silicate (33.83%), iron oxide (1.58%), n-butyl alcohol (24.97%*), polyamide resin (16.42%), silicon dioxide (10.40%), titanium dioxide (7.92%)
GAL WT: 11.88 WT PCT SOLIDS: 73.64 VOL PCT SOLIDS: 53.56 SOLVENT DENSITY: 6.74 VOC LE: 3.1 VOC AP: 3.1 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

823Y67632 barium sulfate (9.73%), bisphenol a/epichlorohydrin polymer-A (25.33%), ethyl acetate (6.60%), hydrous magnesium silicate (13.33%), isopropyl alcohol (3.47%), n-butyl alcohol (5.57%*), propylene glycol monomethyl ether acetate (10.39%), titanium dioxide (18.07%), toluene (4.94%*)
GAL WT: 11.93 WT PCT SOLIDS: 68.00 VOL PCT SOLIDS: 47.99 SOLVENT DENSITY: 7.34 VOC LE: 3.8 VOC AP: 3.8 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

823Y67633 barium sulfate (9.32%), bisphenol a/epichlorohydrin polymer-A (25.94%), carbon black (.16%), ethyl acetate (6.88%), hydrous magnesium silicate (12.67%), isopropyl alcohol (3.74%), n-butyl alcohol (5.69% *), propylene glycol monomethyl ether acetate (10.06%), titanium dioxide (17.09%), toluene (5.06%*)
GAL WT: 11.77 WT PCT SOLIDS: 67.44 VOL PCT SOLIDS: 47.66 SOLVENT DENSITY: 7.32 VOC LE: 3.8 VOC AP: 3.8 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

823Y67635 barium sulfate (9.64%), bisphenol a/epichlorohydrin polymer-A (25.25%), ethyl acetate (6.82%), hydrous magnesium silicate (13.18%), isopropyl alcohol (3.47%), n-butyl alcohol (5.56%*), propylene glycol monomethyl ether acetate (10.28%), titanium dioxide (17.84%), toluene (4.92%*)
GAL WT: 11.91 WT PCT SOLIDS: 67.84 VOL PCT SOLIDS: 47.78 SOLVENT DENSITY: 7.33 VOC LE: 3.8 VOC AP: 3.8 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

823Y67637 barium sulfate (9.65%), bisphenol a/epichlorohydrin polymer-A (25.29%), ethyl acetate (6.93%), hydrous magnesium silicate (13.22%), isopropyl alcohol (3.48%), n-butyl alcohol (5.56%*), propylene glycol monomethyl ether acetate (10.25%), titanium dioxide (17.91%), toluene (4.93%*)
GAL WT: 11.89 WT PCT SOLIDS: 67.73 VOL PCT SOLIDS: 47.70 SOLVENT DENSITY: 7.34 VOC LE: 3.8 VOC AP: 3.8 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

823Y67640 bisphenol a/epichlorohydrin polymer-A (47.09%), carbon black (7.05%), ethyl acetate (5.54%), isopropyl alcohol (10.07%), n-butyl alcohol (10.16%*), propylene glycol monomethyl ether acetate (8.03%), tol uene (9.15%*), urea formaldehyde resin (1.46%), 1,2,4-trimethyl benzene (0-1%*)
GAL WT: 8.68 WT PCT SOLIDS: 55.65 VOL PCT SOLIDS: 45.74 SOLVENT DENSITY: 7.09 VOC LE: 3.8 VOC AP: 3.8 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

825-Y- 9031 aromatic hydrocarbon (1.38%), barium metaborate (14.47%*), bisphenol a/epichlorohydrin polymer (12.23%), hydrous magnesium silicate (13.21%), iron oxide (24.50%), isopropyl alcohol (5.74%), medium mineral spirits (2.36%), n-butyl alcohol (2.67%*), organophillic clay (1.15%), propylene glycol monomethyl ether acetate (16.21%), quartz-crystalline silica (1.56%), toluene (2.38%*), 1,2,4-trimethyl benzene (0-1%*)
GAL WT: 13.44 WT PCT SOLIDS: 68.37 VOL PCT SOLIDS: 42.10 SOLVENT DENSITY: 7.34 VOC LE: 4.3 VOC AP: 4.3 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

LF-63226P amidoamine (13.88%), aromatic hydrocarbon-A (9.09%), bisphenol-epichlorohydrin type polymer-A (10.45%), cumene (0-1%*), mica (18.05%), titanium dioxide (25.77%), zinc oxide (15.16%*), 1,2,4-trimethyl benz ene (1-6%*), 2,4,6-dimethylaminomethyl phenol (1.50%)
GAL WT: 13.41 WT PCT SOLIDS: 85.24 VOL PCT SOLIDS: 72.58 SOLVENT DENSITY: 7.22 VOC LE: 2.0 VOC AP: 2.0 H: 3 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-63228P aromatic hydrocarbon-A (5.94%), barium sulfate (6.76%), bisphenol-epichlorohydrin type polymer-B (29.99%), cumene (0-1%*), diacetone alcohol (6.99%), hydrous magnesium silicate (4.13%), tetrahydrofuran (. 30%), titanium dioxide (37.31%), xylene (1-2%*), 1,2,4-trimethyl benzene (0-4%*)
GAL WT: 13.44 WT PCT SOLIDS: 80.34 VOL PCT SOLIDS: 64.87 SOLVENT DENSITY: 7.48 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-63325P amidoamine (16.81%), aromatic hydrocarbon-A

(10.70%), bisphenol-epichlorohydrin type polymer-B (12.66%), calcium phosphosilicate (5.96%), carbon black (.12%), cumene (0-1%*), hydrous magnesium silicate (3 .25%), methyl amyl ketone (1.31%), mica (23.62%), titanium dioxide (15.18%), xylene (0-1%*), 1,2,4-t rimethyl benzene (1-8%*), 2,4,6-dimethylaminomethyl phenol (1.80%)
GAL WT: 11.68 WT PCT SOLIDS: 81.15 VOL PCT SOLIDS: 69.44 SOLVENT DENSITY: 7.19 VOC LE: 2.2 VOC AP: 2.2 H: 3 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-63326P aromatic hydrocarbon-A (5.47%), barium sulfate (7.08%), bisphenol-epichlorohydrin type polymer-B (29.63%), carbon black (.19%), diacetone alcohol (6.86%), hydrous magnesium silicate (4.06%), tetrahydrofuran (.29%), titanium dioxide (36.59%), xylene (1.34%*), 1,2,4-trimethyl benzene (0-4%*)
GAL WT: 13.47 WT PCT SOLIDS: 80.61 VOL PCT SOLIDS: 65.16 SOLVENT DENSITY: 7.50 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-63525P amidoamine (14.89%), aromatic hydrocarbon-A (9.76%), bisphenol-epichlorohydrin type polymer-B (11.22%), calcium barium phosphosilicate (8.52%*), cumene (0-1%*), mica (19.39%), titanium dioxide (27.55%), 1 ,2,4-trimethyl benzene (1-7%*), 2,4,6-dimethylaminomethyl phenol (1.60%)
GAL WT: 12.86 WT PCT SOLIDS: 83.98 VOL PCT SOLIDS: 71.45 SOLVENT DENSITY: 7.22 VOC LE: 2.1 VOC AP: 2.1 H: 3 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-63526P aromatic hydrocarbon-A (5.78%), barium sulfate (6.64%), bisphenol-epichlorohydrin type polymer-B (30.76%), cumene (0-1%*), diacetone alcohol (6.87%), hydrous magnesium silicate (4.05%), tetrahydrofuran (.29%), titanium dioxide (36.65%), xylene (1-2%*), 1,2,4-trimethyl benzene (0-4%*)
GAL WT: 13.38 WT PCT SOLIDS: 80.61 VOL PCT SOLIDS: 65.28 SOLVENT DENSITY: 7.47 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-63725P amidoamine (14.94%), aromatic hydrocarbon-A (9.79%), bisphenol-epichlorohydrin type polymer-B (11.26%), calcium barium phosphosilicate (8.54%*), cumene (0-1%*), mica (19.44%), titanium dioxide (27.62%), 1 ,2,4-trimethyl benzene (1-7%*), 2,4,6-dimethylaminomethyl phenol (1.60%)
GAL WT: 12.86 WT PCT SOLIDS: 84.03 VOL PCT SOLIDS: 71.58 SOLVENT DENSITY: 7.23 VOC LE: 2.1 VOC AP: 2.1 H: 3 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-63726P aromatic hydrocarbon-A (5.75%), barium sulfate (6.60%), bisphenol-epichlorohydrin type polymer-B (31.28%), cumene (0-1%*), diacetone alcohol (6.83%), hydrous magnesium silicate (4.03%), tetrahydrofuran (.29%), titanium dioxide (36.43%), xylene (1-2%*), 1,2,4-trimethyl benzene (0-4%*)
GAL WT: 13.33 WT PCT SOLIDS: 80.75 VOL PCT SOLIDS: 65.67 SOLVENT DENSITY: 7.47 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-84026P aromatic hydrocarbon-A (6.00%), barium sulfate (34.14%), bisphenol-epichlorohydrin type polymer-B (28.62%), carbon black (1.03%), cumene (0-1%*), diacetone alcohol (7.21%), hydrous magnesium silicate (2.71%), kaolin (13.34%), tetrahydrofuran (.11%), xylene (1.34%*), 1,2,4-trimethyl benzene (0-4%*)
GAL WT: 13.59 WT PCT SOLIDS: 81.04 VOL PCT SOLIDS: 65.46 SOLVENT DENSITY: 7.46 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-66226P acrylic polymer-B (1.16%), aromatic hydrocarbon-A (6.42%), barium sulfate (10.49%), bisphenol-epichloroh ydrin type polymer-B (35.63%), cumene (0-1%*), diacetone alcohol (8.20%), hydrous magnesium silicate (6.40%), isoindolinone pigment (11.52%), monoazo pigment (5.67%), tetrahydrofuran (.40%), titanium di oxide (5.12%), xylene (1-2%*), 1,2,4-trimethyl benzene (0-5%*)
GAL WT: 11.31 WT PCT SOLIDS: 77.35 VOL PCT SOLIDS: 65.81 SOLVENT DENSITY: 7.49 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-66326P acrylic polymer-B (2.56%), aromatic hydrocarbon-A (7.24%), bisphenol-epichlorohydrin type polymer-B (39.54 %), butyl acetate (1.33%), cumene (0-1%*), diacetone alcohol (7.52%), iron oxide (1.46%), monoazo pigment (13.79%), propylene carbonate (1.28%), tetrahydrofuran (.87%), titanium dioxide (16.67%), xyle ne (0-1%*), 1,2,4-trimethyl benzene (1-5%*)
GAL WT: 10.64 WT PCT SOLIDS: 75.41 VOL PCT SOLIDS: 65.30 SOLVENT DENSITY: 7.54 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-66425P acrylic polymer-B (1.39%), aromatic hydrocarbon-A (6.60%), barium sulfate (10.37%), bisphenol-epichlorohydrin type polymer-B (39.47%), cumene (0-1%*), diacetone alcohol (9.49%), hydrous magnesium silicate (6.33%), monoazo pigment (7.16%), quinacridone pigment (8.09%), tetrahydrofuran (.47%), titanium diox ide (1.45%), xylene (1-2%*), 1,2,4-trimethyl benzene (1-5%*)
GAL WT: 10.62 WT PCT SOLIDS: 75.49 VOL PCT SOLIDS: 65.32 SOLVENT DENSITY: 7.51 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-66526P aromatic hydrocarbon-A (3.04%), barium sulfate (19.35%), bisphenol a/epichlorohydrin polymer-A (3.11%), bisphenol-epichlorohydrin type polymer-B (29.24%), diacetone alcohol (8.12%), ethyl acetate (2.16%), e thylene glycol monobutylether (1.73%*), hydrous magnesium silicate (11.81%), isopropyl alcohol (2.16 %), phthalocyanine blue pigment (1.29%), tetrahydrofuran (.26%), titanium dioxide (9.45%), xylene (1 .24%*), 1,2,4-trimethyl benzene (0-2%*)
GAL WT: 12.33 WT PCT SOLIDS: 76.72 VOL PCT SOLIDS: 61.34 SOLVENT DENSITY: 7.42 VOC LE: 2.9 VOC AP: 2.9 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-66626P aromatic hydrocarbon-A (4.07%), barium sulfate (19.08%), bisphenol-epichlorohydrin type polymer-B (34.59%), diacetone alcohol (9.14%), ethylene glycol monobutylether (1.71%*), hydrous magnesium silicate (11.65%), iron oxide (1.06%), tetrahydrofuran (.31%), titanium dioxide (9.32%), xylene (1.36%*), 1,2, 4-trimethyl benzene (0-3%*)
GAL WT: 12.60 WT PCT SOLIDS: 79.63 VOL PCT SOLIDS: 65.89 SOLVENT DENSITY: 7.52 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

LF-71125P amidoamine (13.39%), aromatic hydrocarbon-A (6.85%), barium sulfate (26.81%), bisphenol-epichlorohydrin type polymer-B (10.08%), calcium phosphosilicate (5.62%), cumene (0-1%*), hydrous magnesium silicate (3.06%), iron oxide (8.86%), mica (14.49%), quartz-crystalline silica (.56%), 1,2,4-trimethyl benzene (1-6%*), 2,4,6-dimethylaminomethyl phenol (1.42%)
GAL WT: 13.81 WT PCT SOLIDS: 85.31 VOL PCT SOLIDS: 71.97 SOLVENT DENSITY: 7.24 VOC LE: 2.0 VOC AP: 2.0 H: 3 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

VG-400 polyamide resin (56.45%), toluene (19.35%*), xylene (24.19%*), GAL WT: 7.69 WT PCT SOLIDS: 56.45 VOL PCT SOLIDS: 53.65 SOLVENT DENSITY: 7.23 VOC LE: 3.3 VOC AP: 3.3 H: 2 F: 3 R: 1 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

1LB26P amidoamine (14.98%), aromatic hydrocarbon-A (9.82%), bisphenol-epichlorohydrin type polymer-B (11.29%), calcium

barium phosphosilicate (8.57%*), cumene (0-1%*), mica (19.50%), titanium dioxide (27.69%), xylene (0-1%*), 1,2,4-trimethyl benzene (1-7%*), 2,4,6-dimethylaminomethyl phenol (1.61%)
GAL WT: 12.86 WT PCT SOLIDS: 84.06 VOL PCT SOLIDS: 71.62 SOLVENT DENSITY: 7.22 VOC LE: 2.0 VOC AP: 2.0 H: 3 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

1LB26P aromatic hydrocarbon-A (5.59%), barium sulfate (6.78%), bisphenol-epichlorohydrin type polymer-B (30.37%), diacetone alcohol (7.01%), hydrous magnesium silicate (4.14%), tetrahydrofuran (.30%), titanium dioxide (37.41%), xylene (1-2%*), 1,2,4-trimethyl benzene (0-4%*)
GAL WT: 13.48 WT PCT SOLIDS: 80.84 VOL PCT SOLIDS: 65.49 SOLVENT DENSITY: 7.48 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

2MB25P amidoamine (17.27%), aromatic hydrocarbon-A (10.99%), bisphenol-epichlorohydrin type polymer-B (13.01%), calcium phosphosilicate (6.13%), cumene (0-1%*), hydrous magnesium silicate (3.34%), mica (24.26%), titanium dioxide (15.60%), xylene (0-1%*), 1,2,4-trimethyl benzene (1-8%*), 2,4,6-dimethylaminomethyl phenol (1.85%)
GAL WT: 11.77 WT PCT SOLIDS: 82.15 VOL PCT SOLIDS: 70.90 SOLVENT DENSITY: 7.22 VOC LE: 2.1 VOC AP: 2.1 H: 3 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

2MB26P aromatic hydrocarbon-A (5.11%), barium sulfate (15.37%), bisphenol-epichlorohydrin type polymer-B (33.26%), diacetone alcohol (7.90%), ethylene glycol monobutylether (1.37%*), hydrous magnesium silicate (9.38%), tetrahydrofuran (.28%), titanium dioxide (19.63%), xylene (1-2%*), 1,2,4-trimethyl benzene (0-4%*)
GAL WT: 12.91 WT PCT SOLIDS: 79.95 VOL PCT SOLIDS: 65.52 SOLVENT DENSITY: 7.51 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

3DB25P amidoamine (19.17%), aromatic hydrocarbon-A (10.34%), bisphenol-epichlorohydrin type polymer-B (14.44%), calcium barium phosphosilicate (10.95%*), cumene (0-1%*), mica (27.75%), titanium dioxide (8.15%), xylene (0-1%*), 1,2,4-trimethyl benzene (1-7%*), 2,4,6-dimethylaminomethyl phenol (2.06%)
GAL WT: 11.44 WT PCT SOLIDS: 83.14 VOL PCT SOLIDS: 73.27 SOLVENT DENSITY: 7.22 VOC LE: 1.9 VOC AP: 1.9 H: 3 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

3DB26P aromatic hydrocarbon-A (4.27%), barium sulfate (20.67%), bisphenol-epichlorohydrin type polymer-B (34.16%), diacetone alcohol (8.63%), ethylene glycol monobutylether (1.85%*), hydrous magnesium silicate (12.62%), tetrahydrofuran (.28%), titanium dioxide (10.10%), xylene (1-2%*), 1,2,4-trimethyl benzene (0-3%*)
GAL WT: 12.78 WT PCT SOLIDS: 80.01 VOL PCT SOLIDS: 66.09 SOLVENT DENSITY: 7.53 VOC LE: 2.6 VOC AP: 2.6 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

4NB25P amidoamine (20.18%), aromatic hydrocarbon-A (12.46%), bisphenol-epichlorohydrin type polymer-B (15.20%), calcium barium phosphosilicate (11.53%*), cumene (0-1%*), mica (29.99%), xylene (0-1%*), 1,2,4-trimethyl benzene (1-9%*), 2,4,6-dimethylaminomethyl phenol (2.17%)
GAL WT: 10.73 WT PCT SOLIDS: 79.76 VOL PCT SOLIDS: 69.91 SOLVENT DENSITY: 7.22 VOC LE: 2.2 VOC AP: 2.2 H: 3 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

4NB26P aromatic hydrocarbon-A (2.82%), barium sulfate (25.94%), bisphenol-epichlorohydrin type polymer-B (36.79%), diacetone alcohol (9.27%), ethylene glycol monobutylether (2.32%*), hydrous magnesium silicate (15.83%), tetrahydrofuran (.27%), xylene (1-2%*), 1,2,4-trimethyl benzene (0-2%*)
GAL WT: 12.64 WT PCT SOLIDS: 81.16 VOL PCT SOLIDS: 68.56 SOLVENT DENSITY: 7.57 VOC LE: 2.4 VOC AP: 2.4 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

525-450 bisphenol-epichlorohydrin type polymer-B (24.66%), calcium carbonate (6.32%), hydrous magnesium silicate (25.99%), methyl isobutyl ketone (9.94%*), organoclay (2.26%), quartz-crystalline silica (2.71%), titanium dioxide (9.03%), toluene (9.18%*), xylene (8.22%*)
GAL WT: 11.88 WT PCT SOLIDS: 72.66 VOL PCT SOLIDS: 53.61 SOLVENT DENSITY: 7.00 VOC LE: 3.2 VOC AP: 3.2 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

525-451 bisphenol-epichlorohydrin type polyme-B (24.66%), calcium carbonate (6.32%), hydrous magnesium silicate (25.99%), methyl isobutyl ketone (9.94%*), organoclay (2.26%), quartz-crystalline silica (2.71%), titanium dioxide (9.03%), toluene (9.18%*), xylene (8.22%*)
GAL WT: 11.88 WT PCT SOLIDS: 72.66 VOL PCT SOLIDS: 53.61 SOLVENT DENSITY: 7.00 VOC LE: 3.2 VOC AP: 3.2 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

6AL25P aluminum (25.29%*), amidoamine (19.37%), aromatic hydrocarbon-A (8.13%), bisphenol-epichlorohydrin type polymer-B (14.82%), calcium barium phosphosilicate (11.08%*), cumene (0-1%*), medium mineral spirits (13.61%), 1,2,4-trimethyl benzene (1-6%*), 2,4,6-dimethylaminomethyl phenol (2.04%)
GAL WT: 9.79 WT PCT SOLIDS: 73.05 VOL PCT SOLIDS: 61.25 SOLVENT DENSITY: 6.81 VOC LE: 2.6 VOC AP: 2.6 H: 3 F: 2 R: 1 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

Section 313 Supplier Notification: The chemicals listed above with an asterisk preceeding the percentage are subject to the reporting requirements of Section 313 of the Emergency Planning and Right-To-Know Act of 1986 and of 40 CFR 372.

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.

Product Manager - High Performance Coatings

Rev. 1/98
Prepared by D. G. Detweiler

H-51570/E-P0102

(2)

MSDS HPC 4
HIGH SOLIDS IMRON® ENAMELS
HIGH PERFORMANCE COATINGS
January 1, 1999

#333

MATERIAL SAFETY DATA SHEET

HIGH SOLIDS IMRON® ENAMELS

Section I - Manufacturer

Manufacturer:
DuPont Co.
Automotive
Wilmington, Delaware 19898
Telephone:
Product Information (800)441-7515
Medical emergency (800) 441-3637
Transportation emergency (800) 424-9300 (CHEMTREC)

Product: High Solids Imron® Enamels
OSHA Hazard Class: See Section X for specific data.
DOT Shipping Name: See DOT addendum.

Section II - Hazardous Ingredients

(See Section X)

Ingredients	*CAS No.*	*Vapor Pressure (20°C. mm Hg)*	*Exposure Limits* *
Acrylic polymer-A	42767-92-0	None	None-A,O
Acrylic polymer-B	Not Available	None	None-A,O
Acrylic polymer-C	77358-01-1	None	None-A,O
Acrylic polymer-D	70942-12-0	None	None-A,O
Aluminum	7429-90-5	None	10 mg/m³-A 15 mg/m³-O 5 mg/m³-O Resp
Amorphous silica - fumed	69012-64-2	None	2 mg/m³-A Dust Resp 1 mg/m³-D Dust Resp None-O
Aromatic hydrocarbon	64742-95-6	10.0@25°C	None-A,O
Butyl acetate	123-86-4	8.0	150 ppm-A,O 200 ppm-A 15 min(STEL)
Carbon black	1333-86-4	None	3.5 mg/m³-A,O 0.5 mg/m³-D
Ethyl acetate	141-78-6	76.0	400 ppm-A,O
Ethyl 3-ethoxy propionate	763-69-9	Unknown	None-A,O
Ethylbenzene	100-41-4	7.0	100 ppm-A,O 125 ppm-A 15 min(STEL) 25 ppm-D 8&12 hr
Ethylene glycol monobutyl ether acetate	112-07-2	0.3	20 ppm-D Skin None-A,O
Hexyl acetate Isomers	88230-35-7	0.7	50 ppm-A Hexyl Acet None-O
Iron oxide	1309-37-1	None	5 mg/m³-A 10 mg/m³-O
Isoindolinone pigment	36888-99-0	None	10 mg/m³-A 15 mg/m³-O 5 mg/m³-O Resp
Medium mineral spirits	64742-88-7	10.0	100 ppm-D None-A,O
Methyl amyl ketone	110-43-0	2.2	50 ppm-A 100 ppm-O
Methyl ethyl ketone	78-93-3	71.0	200 ppm A,O 300 ppm-A 15 min(STEL) 200 ppm-D 8&12 hr. TWA 300 ppm-D 15 min TWA
Methyl isobutyl ketone	108-10-1	15.0	50 ppm-A 100 ppm-O 75 ppm-a 15 min(STEL)
Monoazo pigment	12236-82-3	None	10 mg/m³-A None-O
Organoclay	68911-87-5	None	None-A,O
Phthalocyanine blue pigment	147-14-8	None	1 mg/m³-A,O CU, 8 hr
Phthalocyanine green pigment	1328-53-6	None	10 mg/m³-A 15 mg/m³-O 5 mg/m³-O Resp
Polyester resin	71010-58-7	None	None-A,O
Propylene glycol monomethyl ether acetate	108-65-6	3.7	10 ppm-D None-A,O
Quinacridone pigment	1047-16-1	None	10 mg/m³-A 15 mg/m³-O 5 mg/m³-O Resp
Titanium dioxide	13463-67-7	None	10 mg/m³-A,O 5 mg/m³-O Resp 10 mg/m³-D
Toluene	108-88-3	36.7	50 ppm-A Skin 200 ppm-O 300 ppm-O Ceiling 500 ppm-O 10 min. MAX 50 ppm-D 8&12 hr. TWA
Xylene	1330-20-7	7.0@25°C	100 ppm-A,O 150 ppm-A,O 15 min(STEL) 100 ppm-D 8&12 hr 150 ppm-D 15 min TWA

A = ACGIH TLV; O= OSHA; D = DuPont internal limit; S = Supplier Furnished limit; STEL = Short Term Exposure Limit; C = Ceiling.

Section III - Physical Data

Evaporation rate: Less than ether
Vapor Density: *Heavier than air*
Solubility in water: Miscible
Percent volatile by volume: 44.2% - 56.1%
Percent volatile by weight: 29.04% - 45.95%
Boiling range: 54.0°C - 198.0°C ;129.2°F - 384.8°F
Gallon weight: 8.47 - 11.51 lb/gallon

Section IV - Fire and Explosion Data

Flash point: See Section X for exact values.

Flammable limits: 0.8%- 11.5%
Extinguishing media: Universal aqueous film-forming 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: May result in gastrointestinal distress. In the unlikely event of ingestion, call a physician immediately and have the names of ingredients available. **DO NOT INDUCE VOMITING.**
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 respiratory sensitization. This effect may be permanent. 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 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:
Aromatic Hydrocarbon 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. Tests for embryotoxic activity in animals has been inconclusive. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother. **Carbon Black** Is an IARC, NTP or OSHA carcinogen. **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. **Ethyl 3-Ethoxy Propionate** Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother. **Ethylbenzene** Recurrent overexposure may result in liver and kidney injury. Studies in laboratory animals have shown reproductive, embryotoxic and developmental effects. Has shown mutagenic activity in laboratory cell culture tests. Tests in some laboratory animals demonstrate carcinogenic activity. Individuals with preexisting diseases of the central nervous system, lungs, liver, or kidneys may have increased susceptibility to the toxicity of excessive exposures. **Ethylene Glycol Monobutyl Ether Acetate** Can be absorbed through the skin in harmful amounts. May destroy red blood cells. May cause abnormal kidney function. **Medium Mineral Spirits** 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. **Methyl Amyl Ketone** Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. **Methyl Ethyl Ketone** High concentrations have caused embryotoxic effects in laboratory animals. Methyl ethyl ketone 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. **Methyl Isobutyl Ketone** Recurrent overexposure may result in liver and kidney injury. Individuals with preexisting diseases of the central nervous system or lungs may have increased susceptibility to the toxicity of excessive exposures. **Propylene Glycol Monomethyl Ether Acetate** May cause moderate eye burning. Recurrent overexposure may result in liver and kidney injury. **Titanium Dioxide** In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m3 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/m3 level are not relevant to the workplace. **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. Chromosomal changes in the circulating blood of exposed workers have been reported. The significance of these reports is unclear because of exposure to other substances. Individuals with preexisting diseases of the central nervous system may have increased susceptibility to the toxicity of excessive exposures. **WARNING:** This chemical is known to the State of California to cause birth defects or other reproductive harm. **Xylene** Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts. Individuals with pre-existing disease of the central nervous system, kidneys, liver, cardiovascular system, lungs, or bone marrow may have increased susceptibility to the toxicity of excessive exposures. Canada classifies Xylene as a developmental toxin as high exposures to xylenes in some animal studies have been reported to cause health effects on the developing fetus/embryo. These effects were often at levels toxic to the adult animal. The significance of these effects to humans is not known.

Section VI - Reactivity Data

Stability: Stable
Incompatibility (materials to avoid): Water, amines, metal salts
Hazardous decomposition products: CO, CO_2, smoke, and oxides of any heavy metals that are 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. Do not breathe vapors. Do not get in eyes and on skin. 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)

Confine and remove with inert absorbent. Pressure can be generated. Do not seal container. After 48 hours, material may be sealed and disposed of properly.

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 approved TC-19C) during the spray application (or brush or roll application in poorly ventilated areas) of this product and until all vapors and spray mist are exhausted. For mixing and for brush and roll application in well-ventilated areas, a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH TC-23C) may be used. Follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area.*

Refer to the hardener/activator label instructions for further information.

Individuals with history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to this product if mixed with isocyanate activators/hardeners.

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

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 approved respirator or appropriate ventilation.

Section X - Other Information

PRODUCTCODE **INGREDIENTS(See Section II)**

333-AG009 acrylic polymer-d (16.36%), aluminum (7.41%*), aromatic hydrocarbon (1.93%), ethyl acetate (8.29%), ethylbenzene (1.47%*), medium mineral spirits (2.05%), methyl ethyl ketone (19.54%*), polyester resin (35.23%), xylene (6.69%*)
GAL WT: 8.72 WT PCT SOLIDS: 59.98 VOL PCT SOLIDS: 49.63
SOLVENT DENSITY: 6.83 VOC LE: 3.5 VOC AP: 3.5 H:2 F:3
R:1 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

333-23662 acrylic polymer-a (8.54%), acrylic polymer-d (9.18%), ethyl acetate (4.33%), ethylene glycol monobutyl ether acetate (9.29%*), isoindolinone pigment (5.93%), methyl amyl ketone (6.78%), monoazo pigment (5.38%), polyester resin (31.28%), propylene glycol monomethyl ether acetate (12.44%), titanium dioxide (2.13%), xylene (2.20%*)
GAL WT: 9.22 WT PCT SOLIDS: 63.72 VOL PCT SOLIDS: 55.80
SOLVENT DENSITY: 7.57 VOC LE: 3.3 VOC AP: 3.3 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

333-23663 acrylic polymer-a (7.68%), acrylic polymer-d (9.01%), ethyl acetate (4.25%), ethylene glycol monobutyl ether acetate (8.07%*), iron oxide (1.12%), methyl amyl ketone (6.42%), monoazo pigment (7.72%), polyester resin (30.69%), propylene glycol monomethyl ether acetate (12.99%), titanium dioxide (6.24%), xylene (2.16%*)
GAL WT: 9.39 WT PCT SOLIDS: 64.03 VOL PCT SOLIDS: 55.41
SOLVENT DENSITY: 7.57 VOC LE: 3.4 VOC AP: 3.4 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

333-23664 acrylic polymer-a (9.13%), acrylic polymer-d (7.84%), ethyl acetate (4.06%), ethylene glycol monobutyl ether acetate (8.51%*), methyl amyl ketone (6.31%), monoazo pigment (7.91%), polyester resin (29.24%), propylene glycol monomethyl ether acetate (13.99%), quinacridone pigment (5.52%), xylene (2.16%*)
GAL WT: 9.09 WT PCT SOLIDS: 62.64 VOL PCT SOLIDS: 55.26
SOLVENT DENSITY: 7.59 VOC LE: 3.4 VOC AP: 3.4 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

333-23665 acrylic polymer-a (7.42%), acrylic polymer-b (1.34%), acrylic polymer-d (10.04%), butyl acetate (1.91%), ethyl acetate (4.36%), ethylene glycol monobutyl ether acetate (9.17%*), methyl amyl ketone (6.77%), phthalocyanine blue pigment (1.48%), polyester resin (31.57%), propylene glycol monomethyl ether acetate (6.95%), titanium dioxide (12.22%), toluene (3.16%*), xylene (2.64%*)
GAL WT: 9.54 WT PCT SOLIDS: 65.40 VOL PCT SOLIDS: 55.63
SOLVENT DENSITY: 7.44 VOC LE: 3.3 VOC AP: 3.3 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

333-23666 acrylic polymer-a (6.45%), acrylic polymer-d (12.02%), ethyl acetate (3.95%), ethylene glycol monobutyl ether acetate (9.25%*), iron oxide (1.69%), methyl amyl ketone (8.50%), polyester resin (28.55%), propylene glycol monomethyl ether acetate (6.60%), titanium dioxide (15.45%), xylene (2.14%*)
GAL WT: 9.91 WT PCT SOLIDS: 66.96 VOL PCT SOLIDS: 55.87
SOLVENT DENSITY: 7.42 VOC LE: 3.3 VOC AP: 3.3 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

333-25232 acrylic polymer-a (9.07%), acrylic polymer-c (1.03%), acrylic polymer-d (9.78%), ethyl acetate (4.60%), ethylene glycol monobutyl ether acetate (9.54%*), methyl amyl ketone (15.63%), phthalocyanine blue pigment (1.64%), polyester resin (33.35%), titanium dioxide (7.34%), toluene (3.46%*), xylene (2.22%*)
GAL WT: 9.09 WT PCT SOLIDS: 64.02 VOL PCT SOLIDS: 54.57
SOLVENT DENSITY: 7.20 VOC LE: 3.3 VOC AP: 3.3 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

333-67632 acetone (1.57%), acrylic polymer-a (9.12%), acrylic polymer-d (5.51%), ethyl acetate (2.81%), ethylene glycol monobutyl ether acetate (7.90%*), methyl amyl ketone (6.81%), polyester resin (20.10%), propylene glycol monomethyl ether acetate (6.53%), titanium dioxide (35.20%), toluene (1.46%*), xylene (1.56%*)
GAL WT: 11.51 WT PCT SOLIDS: 70.96 VOL PCT SOLIDS: 64.88
SOLVENT DENSITY: 7.41 VOC LE: 3.9 VOC AP: 3.2 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

333-67633 acrylic polymer-a (5.11%), acrylic polymer-d (8.93%), carbon black (.15%), ethyl acetate (3.27%), ethylene glycol monobutyl ether acetate (6.92%*), iron oxide (1.31%), methyl amyl ketone (14.88%), polyester resin (23.68%), titanium dioxide (28.75%), toluene (2.49%*), xylene (1.62%*)
GAL WT: 10.85 WT PCT SOLIDS: 70.42 VOL PCT SOLIDS: 65.10
SOLVENT DENSITY: 7.15 VOC LE: 3.2 VOC AP: 3.2 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

333-67635 acrylic polymer-a (9.33%), acrylic polymer-d (8.21%), ethyl acetate (2.44%), ethylene glycol monobutyl ether acetate (7.53%*), methyl amyl ketone (6.63%), polyester resin (17.54%), propylene glycol monomethyl ether acetate (6.72%), titanium dioxide (35.88%), toluene (2.89%*), xylene (1.35%*)
GAL WT: 11.63 WT PCT SOLIDS: 72.04 VOL PCT SOLIDS: 56.41
SOLVENT DENSITY: 7.46 VOC LE: 3.3 VOC AP: 3.3 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

333-67637 acrylic polymer-a (4.93%), acrylic polymer-d (9.53%), ethyl acetate (2.92%), ethylene glycol monobutyl ether acetate (8.60%*), methyl amyl ketone (14.39%), polyester resin (20.64%), titanium dioxide (35.05%), toluene (2.61%*), xylene (1.46%*)
GAL WT: 11.35 WT PCT SOLIDS: 71.64 VOL PCT SOLIDS: 54.94
SOLVENT DENSITY: 7.14 VOC LE: 3.2 VOC AP: 3.2 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

333-67640 acrylic polymer-a (5.96%), acrylic polymer-c (1.98%), acrylic polymer-d (11.96%), carbon black (1.98%), ethyl acetate (5.12%), ethylene glycol monobutyl ether acetate (9.29%*), methyl amyl ketone (21.94%), polyester resin (37.21%), toluene (1.62%*),

xylene (2.40%*)
GAL WT: 8.52 WT PCT SOLIDS: 60.05 VOL PCT SOLIDS: 52.15
SOLVENT DENSITY: 7.11 VOC LE: 3.4 VOC AP: 3.4 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

333-67584 acrylic polymer-a (4.94%), acrylic polymer-d (9.41%), ethyl acetate (2.85%), ethylene glycol monobutyl ether acetate (7.87%*), methyl amyl ketone (14.28%), polyester resin (20.42%), titanium dioxide (35.68%), toluene (1.42%*), xylene (1-2%*)
GAL WT: 11.41 WT PCT SOLIDS: 71.61 VOL PCT SOLIDS: 54.79
SOLVENT DENSITY: 7.17 VOC LE: 3.2 VOC AP: 3.2 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

333-67999 acrylic polymer-a (4.50%), acrylic polymer-d (11.93%), carbon black (.16%), ethyl acetate (4.06%), ethylene glycol monobutyl ether acetate (8.67%*), methyl amyl ketone (13.73%), polyester resin (29.34%), titanium dioxide (19.60%), toluene (3.38%*), xylene (2.02%*)
GAL WT: 9.96 WT PCT SOLIDS: 67.45 VOL PCT SOLIDS: 55.00
SOLVENT DENSITY: 7.20 VOC LE: 3.2 VOC AP: 3.2 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

333M24834 acrylic polymer-a (17.71%), acrylic polymer-c (1.82%), acrylic polymer-d (8.67%), carbon black (.11%), ethyl acetate (5.26%), ethylene glycol monobutyl ether acetate (5.04%*), hexyl acetate isomers (3.20%), methyl amyl ketone (24.94%), organoclay (1.40%), phthalocyanine blue pigment (2.23%), phthalocyanine green pigment (2.17%), polyester resin (14.10%), titanium dioxide (12.15%), toluene (1.49%*), xylene (0-1%*)
GAL WT: 9.21 WT PCT SOLIDS: 59.14 VOL PCT SOLIDS: 48.56
SOLVENT DENSITY: 7.04 VOC LE: 3.8 VOC AP: 3.8 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

333M24861 acrylic polymer-a (9.18%), acrylic polymer-d (6.82%), ethyl acetate (10.57%), ethylene glycol monobutyl ether acetate (9.59%*), hexyl acetate isomers (6.55%), methyl amyl ketone (5.99%), methyl ethyl ketone (1.38%*), organoclay (1.17%), polyester resin (14.51%), titanium dioxide (32.90%)
GAL WT: 11.03 WT PCT SOLIDS: 65.22 VOL PCT SOLIDS: 47.83
SOLVENT DENSITY: 7.36 VOC LE: 3.8 VOC AP: 3.8 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

333M24926 acrylic polymer-b (7.83%), amorphous silica - fumed (2.86%), butyl acetate (10.07%), carbon black (1.95%), ethyl acetate (15.68%), ethylbenzene (0-2%*), ethylene glycol monobutyl ether acetate (11.94%*), methyl ethyl ketone (2.29%*), polyester resin (38.49%), xylene (4-6%*)
GAL WT: 8.66 WT PCT SOLIDS: 52.97 VOL PCT SOLIDS: 45.25
SOLVENT DENSITY: 7.44 VOC LE: 4.1 VOC AP: 4.1 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

333M28042 acrylic polymer-a (15.65%), acrylic polymer-b (5.98%), acrylic polymer-d (5.74%), butyl acetate (13.35%), carbon black (.11%), ethyl acetate (2.30%), methyl amyl ketone (7.68%), organoclay (1.60%), phthalocyanine blue pigment (4.50%), polyester resin (13.23%), propylene glycol monomethyl ether acetate (13.48%), titanium dioxide (10.69%), xylene (2.56%*)
GAL WT: 9.32 WT PCT SOLIDS: 59.15 VOL PCT SOLIDS: 48.74
SOLVENT DENSITY: 7.43 VOC LE: 3.8 VOC AP: 3.8 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

333M67632 acrylic polymer-a (9.17%), acrylic polymer-d (6.82%), ethyl acetate (10.57%), ethylene glycol monobutyl ether acetate (9.59%*), hexyl acetate isomers (6.55%), methyl amyl ketone (8.04%), methyl ethyl ketone (1.38%*), organoclay (1.17%), polyester resin (14.51%), titanium dioxide (32.90%), xylene (0-1%*)
GAL WT: 11.03 WT PCT SOLIDS: 65.21 VOL PCT SOLIDS: 47.80
SOLVENT DENSITY: 7.35 VOC LE: 3.8 VOC AP: 3.8 H: 2 F: 3 R: 0
FLASH PT: OSHA STORAGE: NONE

333M67633 acrylic polymer-a (9.98%), acrylic polymer-d (6.98%), carbon black (.21%), ethyl acetate (9.18%), ethylene glycol monobutyl ether acetate (7.21%*), hexyl acetate isomers (3.45%), methyl amyl ketone (15.21%), organoclay (1.51%), polyester resin (14.64%), titanium dioxide (28.22%), xylene (0-1%*)
GAL WT: 10.52 WT PCT SOLIDS: 63.37 VOL PCT SOLIDS: 46.40
SOLVENT DENSITY: 7.19 VOC LE: 3.9 VOC AP: 3.9 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

333M67635 acrylic polymer-a (9.60%), acrylic polymer-d (6.39%), ethyl acetate (9.64%), ethylene glycol monobutyl ether acetate (7.36%*), hexyl acetate isomers (3.42%), methyl amyl ketone (13.84%), organoclay (1.50%), polyester resin (13.49%), titanium dioxide (32.47%), xylene (0-1%*)
GAL WT: 10.90 WT PCT SOLIDS: 64.65 VOL PCT SOLIDS: 46.43
SOLVENT DENSITY: 7.21 VOC LE: 3.9 VOC AP: 3.9 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

333M67637 acrylic polymer-a (9.65%), acrylic polymer-d (6.49%), ethyl acetate (9.52%), ethylene glycol monobutyl ether acetate (7.34%*), hexyl acetate isomers (3.43%), methyl amyl ketone (14.03%), organoclay (1.50%), polyester resin (13.70%), titanium dioxide (31.91%), xylene (0-1%*)
GAL WT: 10.84 WT PCT SOLIDS: 64.35 VOL PCT SOLIDS: 46.42
SOLVENT DENSITY: 7.21 VOC LE: 3.9 VOC AP: 3.9 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

333M67769 acrylic polymer-a (10.11%), acrylic polymer-d (10.32%), ethyl acetate (8.40%), ethylene glycol monobutyl ether acetate (6.31%*), hexyl acetate isomers (2.86%), methyl amyl ketone (17.79%), methyl ethyl ketone (8.21%*), monoazo pigment (2.43%), organoclay (1.25%), polyester resin (21.91%), quinacridone pigment (5.79%), xylene (0-1%*)
GAL WT: 8.47 WT PCT SOLIDS: 54.56 VOL PCT SOLIDS: 45.51
SOLVENT DENSITY: 7.06 VOC LE: 3.8 VOC AP: 3.8 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

334-6247 acrylic polymer-a (4.63%), acrylic polymer-d (10.48%), amorphous silica - fumed (2.04%), carbon black (.46%), ethyl acetate (7.10%), ethyl 3-ethoxy propionate (6.17%), ethylene glycol monobutyl ether acetate (8.91%*), iron oxide (1.79%), methyl amyl ketone (15.34%), polyester resin (21.38%), titanium dioxide (15.77%), xylene (2.22%*)
GAL WT: 9.67 WT PCT SOLIDS: 58.74 VOL PCT SOLIDS: 45.25
SOLVENT DENSITY: 7.29 VOC LE: 4.0 VOC AP: 4.0 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

334-68077 acrylic polymer-d (11.76%), ethyl acetate (4.08%), ethyl 3-ethoxy propionate (6.63%), ethylbenzene (1.03%*), ethylene glycol monobutyl ether acetate (11.05%*), methyl amyl ketone (5.08%), methyl ethyl ketone (6.34%*), methyl isobutyl ketone (4.18%*), phthalocyanine blue pigment (3.04%), polyester resin (25.28%), titanium dioxide (14.16%), xylene (4.69%*)
GAL WT: 9.36 WT PCT SOLIDS: 58.38 VOL PCT SOLIDS: 43.84
SOLVENT DENSITY: 7.27 VOC LE: 4.1 VOC AP: 4.1 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

334-68194 acrylic polymer-a (5.16%), acrylic polymer-c (1.13%), acrylic polymer-d (11.04%), ethyl acetate (7.64%), ethyl 3-ethoxy propionate (7.11%), ethylbenzene (1.03%*), ethylene glycol monobutyl ether acetate (9.61%*), iron oxide (1.72%), methyl amyl ketone (13.74%), methyl ethyl ketone (1.18%*), monoazo pigment (8.15%), polyester resin (23.35%), titanium dioxide (1.76%), xylene (4.69%*)
GAL WT: 8.77 WT PCT SOLIDS: 54.05 VOL PCT SOLIDS: 44.87
SOLVENT DENSITY: 7.31 VOC LE: 4.0 VOC AP: 4.0 H: 2 F: 3 R: 0
FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

Section 313 Supplier Notification: The chemicals listed above with an asterisk preceeding the percentage are subject to the reporting requirements of Section 313 of the Emergency Planning and Right-To-Know Act of 1986 and of 40 CFR 372.

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.

Product Manager - High Performance Coatings

Rev. 1/99
Prepared by D. G. Detweiler

MSDS# 002253 (3)

COLOR WHEEL PAINT MANUFACTURING CO., INC.
2814 Silver Star Road , Orlando, FL 32808

MATERIAL SAFETY DATA SHEET

Telephone Number: (407) 293-6810 or (800) 749-6810 Date of Preparation: 10/7/93
After Hours Emergency Number: (407) 876-5282

SECTION I PRODUCT IDENTIFICATION

PRODUCT NAME: **Optima Super Acrylic Flat House Paint**
PRODUCT NUMBER(S): **112, 113, 114, 117, 118**
PRODUCT CLASS: Exterior Paint, Acrylic, Water Based

SECTION II HAZARDOUS INGREDIENTS

Hazardous Components	CAS#	Percent By Weight	OSHA PEL	ACGIH TLV	Vapor Pressure (mm Hg)	LEL
Total Crystalline Silica as		5.8 - 9.1				
Quartz	14808-60-7		.1 mg/m^3*	.1 mg/m^3*	NA	NA
Cristobalite	14464-46-1		.05 mg/m^3*	.05 mg/m^3*	NA	NA

*As respirable dust

SECTION III PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point/Range: Above 212 Deg F
Vapor Pressure: 17 mm Hg @ 20 Deg C (Water)
Vapor Density: <1 (Air = 1)
Solubility in Water: Dilutable
Specific Gravity (H2O=1): 1.3
% Volatile (Volume): 60.9 - 65.4
Evaporation Rate: <1 (BAc = 1)
Weight per Gallon: 10.7 - 11.0

Appearance and Odor: Creamy liquid with mild odor

SECTION IV FIRE & EXPLOSION DATA

Flash Point (Method): Nonflammable Flammable Limits: LEL n/a UEL n/a
Extinguishing Media: Water Fog
Special Fire Fighting Procedures: Wear self contained breathing apparatus and full protective gear. Water may be used to cool containers to prevent pressure build up.
Unusual Fire and Explosion Hazards: Closed containers may explode when exposed to extreme heat.

DOT Hazard Class: Nonregulated

SECTION V PHYSICAL HAZARDS (REACTIVITY DATA)

Stability: X Stable Conditions to Avoid: Temperatures at or below 32 Deg F or 0 Deg C
__Unstable
Incompatibility (Materials to Avoid): Strong oxidizers (acids)
Hazardous Decomposition of By-products: Thermal decomposition may yield carbon dioxide or carbon monoxide.
Hazardous Polymerization: _May Occur X Will Not Occur
Conditions to Avoid: None known

SECTION VI HEALTH HAZARD

Routes of Exposure: Inhalation, skin contact
Health Hazards (Acute and Chronic): Long term exposure to silica dust, which can only occur when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.
Carcinogenicity: Crystalline Silica has been classified as probably carcinogenic for humans (2A) by IARC. It has not been classified as a carcinogen by NTP or OSHA. .
Medical Conditions Aggravated by Exposure: Vapor or mist may provoke asthmatic response in persons with asthma who are sensitive to airway irritants. Dermatitis.
Signs and Symptoms of Over Exposure:

1. Inhalation - Vapor or mist can cause headache, nausea and irritation of the nose, throat, and lungs in poorly ventilated areas.
2.. Eyes - May cause irritation.
3. Skin - May cause irritation.
4. Ingestion - No known adverse effects.

Emergency and First Aid Procedures:

1. Inhalation - Move subject to fresh air.
2. Eyes - Flush with large amounts of water for 15 minutes. Consult a physician.
3. Skin - Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse.
4. Ingestion - If several ounces are ingested, give 2 glasses of water and induce vomiting. No adverse effects are expected. Consult a physician.

SECTION VII SPECIAL PRECAUTIONS

Steps To Be Taken In Case Material Is Released Or Spilled: Small spills should be flushed with large amounts of water. Large spills should be contained with a suitable absorbent and collected for disposal.
Waste Disposal Method: The nonvolatile portion of this material is not considered hazardous and can be disposed of in landfill according to local, state, and federal regulations.
Precautions To Be Taken In Handling And Storage: Use with adequate ventilation. Avoid contact with skin and clothing. Wash thoroughly after handling. Protect from extreme heat and cold.

SECTION VIII - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

Respiratory Protection: None with sufficient ventilation. For poorly ventilated areas, use MSHA/NIOSH approved air-purifying respirator with organic vapor cartridges.

Ventilation: X Local Exhaust _ Special
X Mechanical Exhaust X Other - Forced ventilation from outside source

Protective Gloves: Neoprene

Eye Protection: Protective goggles or face shield

Work/Hygienic Practices: Use protective cream for sensitive skin and wash from affected areas as soon as possible. Avoid prolonged breathing of vapors or spray mist.

MSDS HPC 9
THINNERS & REDUCERS
HIGH PERFORMANCECOATINGS
January 1, 1998

MSDS # 101233

MATERIAL SAFETY DATA SHEET
THINNERS & REDUCERS

Section I - Manufacturer

Manufacturer:
DuPont Co.
Automotive
Wilmington, Delaware 19898

Telephone:
Product information (800)441-7515
Medical emergency (800) 441-3637
Transportation emergency (800) 424-9300 (CHEMTREC)

Product: Thinners & Reducers
D.O.T Hazard Class: Flammable; Combustible. See Section X for specific data.
Shipping Name: Paint Related Materials UN 1263 for Flammable items.

Section II - Hazardous Ingredients (See Section X)

Ingredients	*CAS No.*	*Vapor Pressure (20°C. mm Hg)*	*Exposure Limits* *
Acetone	67-64-1	184.0	500 ppm-A 1000 ppm-O 750 ppm-A 15 min(STEL)
Aromatic hydrocarbon A	64742-95-6	10.0 @ 25C	None-A,O
Aromatic hydrocarbon B	64742-94-5	10.0	None-A,O as Trimethyl benzene
Butyl acetate	123-86-4	8.0	150 ppm - A,O 200 ppm -A 15 min(STEL)
Cumene	98-82-8	3.7	50 ppm-A,O Skin
Cyclohexane	110-82-7	100 @ 60 C	300 ppm-A,O 150 ppm-D 12 hr. TWA
Diacetone alcohol	123-42-2	1.1 @ 0C	50 ppm-A,O
Diethylene glycol monobutyl ether acetate	124-17-4	Unknown	None-A,O
Ethyl Acetate	141-786	76.0	400 ppm-A,O
Ethylbenzene	100-41-4	7.0	100 ppm-A,O 125 ppm-A 15 min(STEL)
Ethylene glycol monobutyl ether acetate	112-07-2	0.3	20 ppm-D Skin None-A,O
Isopropyl alcohol	67-63-0	33.0	400 ppm-A,O 500 ppm-A 15 min(STEL) 400 ppm-D 8&12 hr
Medium mineral spirits	64742-88-7	None	100 ppm-D None-A,O
Methyl ethyl ketone	78-93-3	71.0	200 ppm-A,O 300 ppm-A 15 min(STEL) 200 ppm-D 8&12 hr TWA 300 ppm-D 15 min(STEL)
Methyl isoamyl ketone	110-12-3	4.5	50 ppm-A None-O
Methyl isobutyl ketone	108-10-1	15.0	50 ppm - A 100 ppm-O 75 ppm - A 15 min (STEL)
Mixed dibasic esters	None	0.2	10mg/m³-D None-A,O
n-Butyl alcohol	71-63-3	5.5	50 ppm-A Ceiling Skin 100 ppm -O 25 ppm-D 50 ppm-D 15 min TWA
Naphthalene	91-20-3	1.0@52.6C	10 ppm-A,O
Petroleum naphtha	64742-89-8	50@ 25C	300 ppm-A,O 400 ppm(STEL) 100 ppm-D
Propylene glycol methyl ether	107-98-2	10.9 @ 25C	100 ppm-A 150 ppm-A 15 min (STEL) None-O
Propylene glycol monomethyl ether acetate	108-65-6	3.7	None-A,O
Silicone resin	9016-00-6	None	None-A,O
Toluene	108-88-3	36.7	50 ppm-A Skin 200 ppm-O 300 ppm-O Ceiling 500 ppm-O 10 min MAX 50 ppm-D 8&12 hr TWA
VM&P naphtha	64742-89-8	15 @ 37.8C	300 ppm-A,O 400 ppm-O 15 min(STEL) 100 ppm-D
Xylene	1330-20-7	7.0 @ 25C	100 ppm-A,O 150 ppm-A 15 min (STEL) 100 ppm-D 8&12 hr 150 ppm-D 15 min(STEL)
1,2,4-trimethyl benzene	95-63-6	7 @ 44.4C	25 ppm-A,O

A = ACGIH TLV; O= OSHA; D = DuPont internal limit; S = Supplier Furnished limit; STEL = Short Term Exposure Limit; C = Ceiling.

Section III - Physical Data

Evaporation rate: Less than ether
Vapor Density: Heavier than air
Solubility in water: Miscible
Percent volatile by volume: 98.8% - 100.0%
Percent volatile by weight: 98.5% - 100.0%
Boiling range: 54°C - 250°C ; 129°F - 482°F
Gallon weight: 6.33 - 8.11 lb/gallon

Section IV - Fire and Explosion Data

Flash point (closed cup): See Section X for exact values.
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: Gastrointestinal distress. In the unlikely event of ingestion, call a physician immediately and have the 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:

Aromatic hydrocarbon-A, B 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. Tests for embryotoxic activity in animals has been inconclusive. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother. **Cumene** Can be absorbed through the skin in harmful amounts. Liquid splashes in the eye may result in chemical burns. Recurrent overexposure may result in liver and kidney injury. Tests for mutagenic activity in bacterial or mammalian cell cultures have been inconclusive. **Diacetone alcohol** Recurrent overexposure may result in liver and kidney injury. **Diethylene glycol monobutyl ether acetate** Recurrent overexposure may result in liver and kidney injury. **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. **Ethylbenzene** Recurrent overexposure may result in liver and kidney injury. Studies in laboratory animals have shown reproductive, embryotoxic and developmental effects. Has shown mutagenic activity in laboratory cell culture tests. Tests in some laboratory animals demonstrate carcinogenic activity. Individuals with preexisting diseases of the central nervous system, lungs, liver, or kidneys may have increased susceptibility to the toxicity of excessive exposures. **Ethylene glycol monobutyl ether acetate** Can be absorbed through the skin in harmful amounts. May destroy red blood cells. May cause abnormal kidney function. **Isopropyl alcohol** Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. **Medium mineral spirits** 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. **Methyl ethyl ketone** High concentrations have caused embryotoxic effects in laboratory animals. Methyl ethyl ketone 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. **Methyl isoamyl ketone** Extremely high oral doses in laboratory animals have shown weight changes in various organs such as the liver, kidney and adrenal gland. In addition liver injury was observed. **Methyl isobutyl ketone** Recurrent overexposure may result in liver and kidney injury. Individuals with preexisting diseases of the central nervous system or lungs may have increased susceptibility to the toxicity of excessive exposures. **Mixed dibasic esters** High airborne levels in rats have shown mild injury to the olfactory region of the nose. **N-butyl alcohol** Liquid splashes in the eye may result in chemical burns. May cause abnormal blood forming function with anemia. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts. **Naphthalene** Recurrent overexposure may result in liver and kidney injury. Individuals with preexisting diseases of the liver or kidneys may have increased susceptibility to the toxicity of excessive exposures. **Petroleum naphtha** 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. **Propylene glycol methyl ether** Overexposure may lead to kidney, liver and lung damage. Individuals with preexisting diseases of the liver may have increased susceptibility to the toxicity of excessive exposures. Can be absorbed through the skin in harmful amounts. **Propylene glycol monomethyl ether acetate** May cause moderate eye burning. Recurrent overexposure may result in liver and kidney injury. **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. **WARNING:** This chemical is known to the State of California to cause birth defects or other reproductive harm. Chromosomal changes in the circulating blood of exposed work been reported. The significance of these reports is unclear of exposure to other substances. Individuals with preexisting diseases of the central nervous system may have increased susceptibility to the toxicity of excessive exposures. **VM&P naphtha** 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. **Xylene** Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts. Individuals with pre-existing disease of the central nervous system, kidneys, liver, cardiovascular system, lungs, or bone marrow 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, oxides of metals shown 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 property fitted vapor/particulate respirator, approved by NIOSH (TC-23C). Confine and remove with inert absorbent. If the material has been activated with an isocyanate, wear a positive-pressure supplied-air respirator, approved by NIOSH (TC-19C).

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 vapor/particulate respirator approved by NIOSH (TC-23C) for use with paint during application and until all vapors and spray mists are exhausted. 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 exposure limits.
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 approved respirator or appropriate ventilation.

Section X - Other Information

Product Code Ingredients / HMIS Data

36407 acetone (6.99%), ethylbenzene (0-1%*), isopropyl alcohol (7.55%), methyl isoamyl ketone (1.60%), methyl isobutyl ketone (7.88%*), n-butyl alcohol (6.20%*), toluene (65.51%*), xylene (3-4%*)
GAL WT: 7.04 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 7.04 VOC LE: 7.1 VOC AP: 6.5 H: 2 F: 3 R: 0 FLASH PT: BELOW 20 F (CC) OSHA STORAGE: IB

37692 acetone (28.26%), butyl acetate (8.07%), ethylbenzene (2-7%*), ethylene glycol monobutyl ether acetate (12.99%*), n-butyl alcohol (8.61%*), toluene (12.08%*), xylene (22-27%*)
GAL WT: 7.04 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 7.04 VOC LE: 7.3 VOC AP: 5.1 H: 2 F: 3 R: 0 FLASH PT: BELOW 20 F (CC) OSHA STORAGE: IB

68083 ethylbenzene (5-13%*), ethylene glycol monobutyl ether acetate (50.00%*), xylene (37-45%*),
GAL WT: 7.48 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 7.48 VOC LE: 7.5 VOC AP: 7.5 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

68084 ethyl acetate (14.59%), ethylbenzene (4-11%*), ethylene glycol monobutyl ether acetate (42.55%*), xylene (31-38%*)
GAL WT: 7.48 WT PCT SOLIDS: 0.29 VOL PCT SOLIDS: 0.26 SOLVENT DENSITY: 7.48 VOC LE: 7.5 VOC AP: 7.5 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

Y32035 ethyl acetate (1.50%), methyl ethyl ketone (98.50%*),GAL WT: 6.67 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 6.67 VOC LE: 6.7 VOC AP: 6.7 H: 2 F: 3 R: 0 FLASH PT: BELOW 20 F (CC) OSHA STORAGE: IB

→ Y32401 ethylene glycol monobutyl ether acetate (98.50%*), xylene (1.23%*),
GAL WT: 7.79 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 7.79 VOC LE: 7.8 VOC AP: 7.8 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 140 - 200 F (CC) OSHA STORAGE: IIIA

Y32688 diethylene glycol monobutyl ether acetate (98.76%), ethylene glycol monobutyl ether acetate (1.23%*)
GAL WT: 8.11 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 8.11 VOC LE: 8.1 VOC AP: 8.1 H: 2 F: 1 R: 1 FLASH PT: ABO VE 200 F (CC)OSHA STORAGE: IIIB

T- 8054 aromatic hydrocarbon (57.08%), cumene (0-5%*), n-butyl alcohol (9.38%*), xylene (0-3%*), 1,2,4-trimethyl benzene (9-41%*)
GAL WT: 7.18 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 7.18 VOC LE: 7.2 VOC AP: 7.2 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

T- 8245 aromatic hydrocarbon-A (31.50%), cumene (0-3%*), n-butyl alcohol (50.00%*), xylene (0-2%*), 1,2,4-trimethyl benzene (5-23%*)
GAL WT: 6.97 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 6.97 VOC LE: 7.0 VOC AP: 7.0 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

T- 8805 ethylbenzene (9-25%*), petroleum naphtha (1.35%), xylene (73-89%*),GAL WT: 7.17 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 7.17 VOC LE: 7.2 VOC AP: 7.2 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

T- 8819 ethylbenzene (4-10%*), n-butyl alcohol (59.79%*), xylene (30-36%*),GAL WT: 6.90 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 6.90 VOC LE: 6.9 VOC AP: 6.9 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

TY 3810 ethylbenzene (0-2%*), methyl ethyl ketone (12.09%*), petroleum naphtha (17.72%), toluene (12-16%*),vm&p naphtha (51.96%), xylene (1-5%*)
GAL WT: 6.33 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 6.33 VOC LE: 6.3 VOC AP: 6.3 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

TY 3819 medium mineral spirits (99.36%), 1,2,4-trimethyl benzene (0-1%*),
GAL WT: 6.44 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 6.44 VOC LE: 6.4 VOC AP: 6.4 H: 2 F: 2 R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

TY 3826 isopropyl alcohol (100.00%),GAL WT: 6.53 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 6.53 VOC LE: 6.5 VOC AP: 6.5 H: 1 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

TY 3871 acetone (10.46%), diacetone alcohol (7.64%), ethylbenzene (0-1%*), methyl isobutyl ketone (7.20%*),propylene glycol methyl ether (35.62%), toluene (0-2%*), vm&p naphtha (35.53%), xylene (0-3%*)
GAL WT: 6.85 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 6.85 VOC LE: 6.9 VOC AP: 6.1 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

TY 8593 acetone (35.05%), butyl acetate (20.02%), n-butyl alcohol (5.00%*), petroleum naphtha (13.52%), propylene glycol monomethyl ether acetate (24.89%), toluene (0-2%*)
GAL WT: 6.93 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 6.93 VOC LE: 7.2 VOC AP: 4.5 H: 2 F: 3 R: 0 FLASH PT: BELOW 20 F (CC) OSHA STORAGE: IB

VGF17761 ethylbenzene (2-6%*), silicone resin (18.74%), xylene (75-79%*),
GAL WT: 7.49 WT PCT SOLIDS: 18.74 VOL PCT SOLIDS: 15.32 SOLVENT DENSITY: 7.19 VOC LE: 6.1 VOC AP: 6.1 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

RT001P ethylbenzene (0-1%*), methyl ethyl ketone (67.98%*), mixed dibasic esters (29.46%), xylene (1-2%*),
GAL WT: 7.24 WT PCT SOLIDS: 0.38 VOL PCT SOLIDS: 0.33 SOLVENT DENSITY: 7.24 VOC LE: 7.2 VOC AP: 7.2 H: 2 F: 3 R: 0 FLASH PT: BELOW 20 F (CC) OSHA STORAGE: IB

RT002P ethylbenzene (9-24%*), silicone resin (1.50%), xylene (75-89%*),
GAL WT: 7.21 WT PCT SOLIDS: 1.50 VOL PCT SOLIDS: 1.18 SOLVENT DENSITY: 7.19 VOC LE: 7.1 VOC AP: 7.1 H: 2 F: 3 R: 0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

3924S acetone (30.58%), cyclohexane (0-1%*), isopropyl alcohol (13.17%), petroleum naphtha (35.58%), toluene (18-21%*)

GAL WT: 6.42 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00
SOLVENT DENSITY: 6.42 VOC LE: 6.4 VOC AP: 4.5 H: 2 F: 3
R: 0 FLASH PT: BELOW 20 F (CC) OSHA STORAGE: IB

3979S aromatic hydrocarbon-B (6.23%), ethylene glycol monobutyl ether acetate (30.00%*), medium mineral spirits (8.00%), naphthalene (0-1%*), propylene glycol monomethyl ether acetate (55.00%), 1,2,4-trimethyl benzene (0-1%*)
GAL WT: 7.76 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00
SOLVENT DENSITY: 7.76 VOC LE: 7.8 VOC AP: 7.8 H: 2 F: 2
R: 0 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

Section 313 Supplier Notification: The chemicals listed above with an asterisk preceeding the percentage are subject to the reporting requirements of Section 313 of the Emergency Planning and Right-To-Know Act of 1986 and of 40 CFR 372.

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.

Product Manager - High Performance Coatings

Rev. 1/98
Prepared by D. G. Detweiler

(5)

MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 95-248

REVISION DATE: 12/18/97 (000) 0814

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: PITT-GUARD RAPID CURE GRAY COMP. A

CHEMICAL FAMILY: Polyamide

WHMIS HAZARD CLASS:

Class B, Division 2 Class D, Division 2, Subdivision A Class D, Division 2, Subdivision B

EMERGENCY MEDICAL/SPILL INFO: (514) 645-1320 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: (404) 761-7771

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA
15101 (412) 492-5555

DATE OF MSDS PREPARATION: 01/16/98

PRIMARY HAZARD WARNING

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. Harmful if swallowed. May cause skin burns. This product contains a material which causes irreversible eye damage. May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction. Vapor and/or spray mist harmful if inhaled. Vapor irritates eyes, nose, and throat.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM.

SECTION 2 - HAZARDOUS INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	TITANIUM DIOXIDE	3 - 7	13463-67-7	
02	TALC	5 - 10	14807-96-6	
03	ISOPROPYL ALCOHOL	10 - 30	67-63-0	
04	2,4,6 TRIS (DIMETHYLAMINOMETHYL) PHENOL	1 - 5	90-72-2	
05	SODIUM ALUMINUM SILICATE	10 - 30	1344-00-9	
06	CARBON BLACK	0.1-1.0	1333-86-4	I
07	POLYAMIDE RESIN	15 - 40	68410-23-1	
08	ETHYL BENZENE	1 - 5	100-41-4	
09	XYLENES	5 - 10	1330-20-7	
10	BENZYL ALCOHOL	3 - 7	100-51-6	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

	ACGIH		ONTARIO	
REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	10 mg/m3	NOT ESTAB.	10 mg/m3	NOT ESTAB.
02	R- 2 mg/m3	NOT ESTAB.	R- 2 mg/m3	NOT ESTAB.
03	400 ppm	500 ppm	400 ppm	500 ppm
04	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
05	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
06	3.5 mg/m3	NOT ESTAB.	3.5 mg/m3	NOT ESTAB.
07	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
08	100 ppm	125 ppm	100 ppm	125 ppm
09	100 ppm	150 ppm	100 ppm	150 ppm
10	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB.
= NOT ESTABLISHED = NOT APPLICABLE]

Consult local authorities for acceptable provincial values.

SECTION 3 - TOXICOLOGICAL PROPERTIES

REF	LD50 ORAL (rat)	LD50 DERMAL (rabbit)	LC50 INHALATION (rat)
01	Not available	Not available	Not available
02	Not available	Not available	Not available
03	5.84 g/kg	13.00 g/kg	Not available
04	1.20 g/kg	1.28 g/kg	Not available
05	Not available	Not available	Not available
06	Not available	Not available	Not available
07	Not available	Not available	Not available
08	3.50 g/kg	17.80 g/kg	Not available
09	4.30 g/kg	Not available	Not available
10	1.23 g/kg	2.00 g/kg	Not available

THE FOLLOWING INFORMATION IS REQUIRED UNDER CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

REF	ACUTE TOXICITY
01	NO SEVERE HAZARDS
02	NO SEVERE HAZARDS
03	NO SEVERE HAZARDS
04	SKIN SENSITIZER/EYE CORROSIVE/SKIN IRRITANT
05	NO SEVERE HAZARDS
06	NO SEVERE HAZARDS
07	SKIN SENSITIZER/EYE IRRITANT
08	NO SEVERE HAZARDS
09	NO SEVERE HAZARDS
10	EYE IRRITANT

REF	CHRONIC TOXICITY
01	CARCINOGEN/LUNG
02	CARCINOGEN/LUNG
03	NO LONG-TERM EFFECTS IDENTIFIED
04	LUNG
05	NO LONG-TERM EFFECTS IDENTIFIED
06	CARCINOGEN
07	NO LONG-TERM EFFECTS IDENTIFIED
08	CARCINOGEN/KIDNEY/LIVER/LUNG
09	NO LONG-TERM EFFECTS IDENTIFIED
10	NO LONG-TERM EFFECTS IDENTIFIED

HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: This product contains a material which causes irreversible eye damage.

SKIN CONTACT: May cause skin burns. May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION: Vapor and/or spray mist harmful if inhaled. Vapor irritates eyes, nose, and throat. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. Prolonged inhalation of an ingredient(s) in this product may cause edema of the lungs and/or lung damage. This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure. Potential for inhalation of titanium dioxide dusts from coatings is very limited. Since overexposures are not expected, there is no significant hazard for man. This product contains talc. In a lifetime inhalation study female rats exposed to an elevated respirable concentration (9 times the Permissible Exposure Limit) of cosmetic grade talc developed lung cancer. To date, no U.S. regulatory agency has classified talc as a carcinogen based on this data. This product contains carbon black which has been rated an IARC 2B carcinogen due to animal data. Ethylbenzene has been reported by NTP to cause cancer in laboratory animals following a chronic (2 year) inhalation exposure. Dose levels of 75, 250 and 750 ppm were used, with

evidence of carcinogenicity found in the kidneys of rats and the lung and liver of mice at 750 ppm. The No Observed Effect Level (NOEL) was 75 ppm. The relevance of these findings to humans is uncertain, but appropriate safeguards should be employed to reduce or eliminate inhalation exposure to ethylbenzene.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Redness, itching, burning sensation and visual disturbances
may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: Not available

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, give one to two eight ounce glasses of water, but do not induce vomiting. Gently wipe out inside mouth to remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses, flush eye immediately with a gentle stream of warm water for at least 30 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE OR EXPLOSION DATA

FLASHPOINT: 62 Degrees F (17 Degrees C) (PENSKY-MARTENS CLOSED CUP)

FLAMMABLE LIMITS: Lower explosion limit (LEL): 1.8

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IB flammable liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

AUTOIGNITION TEMPERATURE: Not available

SECTION 6 - PREVENTIVE MEASURES

ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take
up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IB flammable liquids.

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear chemical-type splash goggles or full face shield when possibility exists for eye contact due to splashing or spraying liquid, airborne
particles, or vapors.

SKIN PROTECTION: Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: butyl rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH-approved
air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the
type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section
2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 7 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 180 - 400Degrees F

SOLUBILITY IN WATER: 15.6 %

VAPOR PRESSURE: 20.4 mmHg

WEIGHT/GALLON (LBS): 11.5 (IMPERIAL)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 40.770

% SOLIDS BY WEIGHT: 69.99

SPECIFIC GRAVITY: 1.159

EVAPORATION RATE(BuOAc=100): 154

PHYSICAL STATE: LIQUID

FREEZING POINT: Not available

ODOR THRESHHOLD: Not available

COEFFICIENT OF OIL/WATER DISTRIBUTION: Not available

ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

SECTION 8 - STABILITY AND REACTIVITY DATA

This product is normally stable and will not undergo hazardous reactions.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; oxides of nitrogen ; lower molecular weight polymer fractions; Extreme
heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 9 - PREPARATION INFORMATION PREPARED BY: Product Safety Department PHONE
NUMBER: (412)492-5555 DATE OF MSDS PREPARATION: 01/16/98

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	3*	HEALTH	3
FLAMMABILITY	3	FLAMMABILITY	3
REACTIVITY	0	INSTABILITY	0

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: 95-248 (00097382.00195-248)

Manufactured and Supplied by:

PPG INDUSTRIES, EAST POINT

1377 OAKLEIGH DRIVE

EAST POINT, GA 30304

MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 95-249

REVISION DATE: 07/15/97 (000) 0814

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: EPOXY MASTIC CATALYST COMP B

CHEMICAL FAMILY: Epoxy

WHMIS HAZARD CLASS:

Class B, Division 2 Class D, Division 2, Subdivision A Class D, Division 2, Subdivision B

EMERGENCY MEDICAL/SPILL INFO: (514) 645-1320 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: (404) 761-7771

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA
15101 (412) 492-5555

DATE OF MSDS PREPARATION: 01/16/98

PRIMARY HAZARD WARNING

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. Harmful if swallowed. May cause moderate skin irritation.
Causes eye irritation. May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction. Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. May cause irritation
and/or allergic respiratory reaction in lungs.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM.

SECTION 2 - HAZARDOUS INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	TALC	10 - 30	14807-96-6	
02	NITROETHANE	1 - 5	79-24-3	
03	SODIUM ALUMINUM SILICATE	15 - 40	1344-00-9	
04	ALKYL GLYCIDYL ETHER	3 - 7	120547-52-6	
05	EPOXY RESIN	10 - 30	25068-38-6	
06	ETHYL BENZENE	1 - 5	100-41-4	
07	XYLENES	5 - 10	1330-20-7	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

	ACGIH		ONTARIO	
REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	R- 2 mg/m3	NOT ESTAB.	R- 2 mg/m3	NOT ESTAB.
02	100 ppm	NOT ESTAB.	100 ppm	NOT ESTAB.
03	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
04	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB
05	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
06	100 ppm	125 ppm	100 ppm	125 ppm
07	100 ppm	150 ppm	100 ppm	150 ppm

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB.
= NOT ESTABLISHED = NOT APPLICABLE]

Consult local authorities for acceptable provincial values.

SECTION 3 - TOXICOLOGICAL PROPERTIES

REF	LD50 ORAL (rat)	LD50 DERMAL (rabbit)	LC50 INHALATION (rat)
01	Not available	Not available	Not available
02	1.10 g/kg	Not available	Not available
03	Not available	Not available	Not available
04	10.00 g/kg	2.00 g/kg	Not available
05	Not available	Not available	Not available
06	3.50 g/kg	17.80 g/kg	Not available
07	4.30 g/kg	Not available	Not available

THE FOLLOWING INFORMATION IS REQUIRED UNDER CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

REF	ACUTE TOXICITY
01	NO SEVERE HAZARDS
02	NO SEVERE HAZARDS
03	NO SEVERE HAZARDS
04	SKIN SENSITIZER
05	SKIN SENSITIZER
06	NO SEVERE HAZARDS
07	NO SEVERE HAZARDS

REF	CHRONIC TOXICITY
01	CARCINOGEN/LUNG
02	KIDNEY/LIVER/NEUROTOXIN
03	NO LONG-TERM EFFECTS IDENTIFIED
04	RESPIRATORY SENSITIZER
05	NO LONG-TERM EFFECTS IDENTIFIED
06	CARCINOGEN/KIDNEY/LIVER/LUNG
07	NO LONG-TERM EFFECTS IDENTIFIED

HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes eye irritation.

SKIN CONTACT: May cause moderate skin irritation. May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION: Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. May cause irritation and/or allergic respiratory reaction in lungs. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. This product contains nitroethane. Studies with laboratory animals have shown that ingestion or inhalation of high levels of nitroethane causes kidney and liver damage and central nervous system effects. This product contains talc. In a lifetime inhalation study female rats exposed to an elevated respirable concentration (9 times the Permissible Exposure Limit) of cosmetic grade talc developed lung cancer. To date, no U.S. regulatory agency has classified talc as a carcinogen based on this data. Ethylbenzene has been reported by NTP to cause cancer in laboratory animals following a chronic (2 year) inhalation exposure. Dose levels
of 75, 250 and 750 ppm were used, with evidence of carcinogenicity found in the kidneys of rats and the lung and liver of mice at 750 ppm. The No Observed Effect Level (NOEL) was 75 ppm. The relevance of these findings to humans is uncertain, but appropriate safeguards should be employed to reduce or eliminate inhalation exposure to ethylbenzene.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Redness, itching, burning sensation and visual disturbances
may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: Not available

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, do not induce vomiting. Gently wipe out inside mouth to
remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE OR EXPLOSION DATA

FLASHPOINT: 80 Degrees F (26 Degrees C) (PENSKY-MARTENS CLOSED CUP)

FLAMMABLE LIMITS: Lower explosion limit (LEL): 1.6

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IC flammable liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

AUTOIGNITION TEMPERATURE: Not available

SECTION 6 - PREVENTIVE MEASURES

ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take
up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IC flammable liquids.

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN PROTECTION: Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: impermeable material. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a

manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH-approved
air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the
type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section
2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 7 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 280 - 396Degrees F

SOLUBILITY IN WATER: 15.6 %

VAPOR PRESSURE: 7.7 mmHg

WEIGHT/GALLON (LBS): 15.1 (IMPERIAL)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 19.840

% SOLIDS BY WEIGHT: 88.24

SPECIFIC GRAVITY: 1.513

EVAPORATION RATE(BuOAc=100): 51

PHYSICAL STATE: LIQUID

FREEZING POINT: Not available

ODOR THRESHHOLD: Not available

COEFFICIENT OF OIL/WATER DISTRIBUTION: Not available

ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

SECTION 8 - STABILITY AND REACTIVITY DATA

This product is normally stable and will not undergo hazardous reactions.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; lower molecular weight polymer fractions; Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 9 - PREPARATION INFORMATION PREPARED BY: Product Safety Department PHONE
NUMBER: (412)492-5555 DATE OF MSDS PREPARATION: 01/16/98

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	3*	HEALTH	3
FLAMMABILITY	3	FLAMMABILITY	3
REACTIVITY	0	INSTABILITY	0

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: 95-249 (00097383.00195-249)

Manufactured and Supplied by:

PPG INDUSTRIES, EAST POINT

1377 OAKLEIGH DRIVE

EAST POINT, GA 30304

(7)

MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 95-8600

REVISION DATE: 12/18/97 (000) 0814

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: PITTHANE SEMIGLOSS NEUTRAL BASE

CHEMICAL FAMILY: Acrylic

WHMIS HAZARD CLASS:

Class B, Division 3 Class D, Division 2, Subdivision A

EMERGENCY MEDICAL/SPILL INFO: (514) 645-1320 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: (404) 761-7771

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA
15101 (412) 492-5555

DATE OF MSDS PREPARATION: 01/16/98

PRIMARY HAZARD WARNING

Combustible. Keep away from heat, sparks, flames, and other sources of ignition.
Do not smoke. Harmful if swallowed. May cause moderate skin irritation. Causes eye irritation. Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM.

SECTION 2 - HAZARDOUS INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	TALC	7 - 13	14807-96-6	
02	1,2,4-TRIMETHYL BENZENE	3 - 7	95-63-6	
03	AROMATIC NAPHTHA	5 - 10	64742-95-6	
04	BARIUM SULFATE	15 - 40	7727-43-7	
05	METHYL (N-AMYL) KETONE	5 - 10	110-43-0	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

	ACGIH		ONTARIO	
REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	R- 2 mg/m3	NOT ESTAB.	R- 2 mg/m3	NOT ESTAB.
02	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
03	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
04	10 mg/m3	NOT ESTAB.	10 mg/m3	NOT ESTAB.
05	50 ppm	NOT ESTAB.	25 ppm	NOT ESTAB.

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB.
= NOT ESTABLISHED = NOT APPLICABLE]

Consult local authorities for acceptable provincial values.

SECTION 3 - TOXICOLOGICAL PROPERTIES

REF	LD50 ORAL (rat)	LD50 DERMAL (rabbit)	LC50 INHALATION (rat)
01	Not available	Not available	Not available
02	Not available	Not available	18.00 mg/L. 4 h
03	4.70 g/kg	3.48 g/kg	Not available
04	Not available	Not available	Not available
05	1.67 g/kg	12.60 g/kg	Not available

THE FOLLOWING INFORMATION IS REQUIRED UNDER CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

REF	ACUTE TOXICITY
01	NO SEVERE HAZARDS
02	NO SEVERE HAZARDS
03	NO SEVERE HAZARDS
04	NO SEVERE HAZARDS
05	NO SEVERE HAZARDS

REF	CHRONIC TOXICITY
01	CARCINOGEN/LUNG
02	NO LONG-TERM EFFECTS IDENTIFIED
03	NO LONG-TERM EFFECTS IDENTIFIED
04	NO LONG-TERM EFFECTS IDENTIFIED
05	NO LONG-TERM EFFECTS IDENTIFIED

HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes eye irritation.

SKIN CONTACT: May cause moderate skin irritation.

INHALATION: Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Repeated exposure to high vapor concentrations may cause
irritation of the respiratory system and permanent brain and nervous system damage.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. This product contains talc. In a lifetime inhalation study female rats exposed to an elevated
respirable concentration (9 times the Permissible Exposure Limit) of cosmetic

grade talc developed lung cancer. To date, no U.S. regulatory agency has classified talc as a carcinogen based on this data.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Redness, itching, burning sensation and visual disturbances
may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: Not available

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, do not induce vomiting. Gently wipe out inside mouth to
remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE OR EXPLOSION DATA

FLASHPOINT: 104 Degrees F (40 Degrees C) (PENSKY-MARTENS CLOSED CUP)

FLAMMABLE LIMITS: Lower explosion limit (LEL): 1.0

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class II combustible liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

AUTOIGNITION TEMPERATURE: Not available

SECTION 6 - PREVENTIVE MEASURES

ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take
up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class II combustible liquids.

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN PROTECTION: Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: nitrile rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH-approved
air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the
type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section
2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 7 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 280 - 399Degrees F

SOLUBILITY IN WATER: .0 %

VAPOR PRESSURE: 2.6 mmHg

WEIGHT/GALLON (LBS): 15.5 (IMPERIAL)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 46.640

% SOLIDS BY WEIGHT: 74.84

SPECIFIC GRAVITY: 1.553

EVAPORATION RATE(BuOAc=100): 30

PHYSICAL STATE: LIQUID

FREEZING POINT: Not available

ODOR THRESHHOLD: Not available

COEFFICIENT OF OIL/WATER DISTRIBUTION: Not available

ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

SECTION 8 - STABILITY AND REACTIVITY DATA

This product is normally stable and will not undergo hazardous reactions.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; oxides of barium ; oxides of sulfur ; lower molecular weight polymer fractions; Extreme heat includes, but is not limited to, flame cutting, brazing,
and welding.

SECTION 9 - PREPARATION INFORMATION PREPARED BY: Product Safety Department
PHONE
NUMBER: (412)492-5555 DATE OF MSDS PREPARATION: 01/16/98

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	2	HEALTH	2
FLAMMABILITY	2	FLAMMABILITY	2
REACTIVITY	0	INSTABILITY	0

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: 95-8600 (00097409.00195-8600)

Manufactured and Supplied by:

PPG INDUSTRIES, EAST POINT

1377 OAKLEIGH DRIVE

EAST POINT, GA 30304

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MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 95-869

REVISION DATE: 08/04/97 (001) 0814

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: PITTHANE 35 SEMI-GLOSS COMPONENT B

CHEMICAL FAMILY: POLYISOCYANATE

WHMIS HAZARD CLASS:

Class B, Division 2 Class D, Division 2, Subdivision A Class D, Division 2, Subdivision B

EMERGENCY MEDICAL/SPILL INFO: (514) 645-1320 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: (404) 761-7771

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA
15101 (412) 492-5555

DATE OF MSDS PREPARATION: 01/19/98

PRIMARY HAZARD WARNING

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. Harmful if swallowed. May cause moderate skin irritation.
Causes severe eye irritation. May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction. Vapor and/or spray mist may be harmful if inhaled. May cause irritation and/or allergic respiratory reaction in lungs. Vapor irritates eyes, nose, and throat.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM.

SECTION 2 - HAZARDOUS INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	N-BUTYL ACETATE	7 - 13	123-86-4	-
02	XYLENES	7 - 13	1330-20-7	
03	HEXANE-1,6-DI-ISOCYANATE POLYMER	60- 100	28182-81-2	
04	HEXAMETHYLENE-DI-ISOCYANATE	0.1-1.0	822-06-0	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH TLV-TWA	ACGIH TLV-STEL	ONTARIO PEL-TWA	ONTARIO PEL-STEL
01	150 ppm	200 ppm	150 ppm	200 ppm
02	100 ppm	150 ppm	100 ppm	150 ppm
03	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
03	IPEL-TWA: 0.5 mg/m3		IPEL-STEL: 1 mg/m3	
04	0.005 ppm	NOT ESTAB.	C- 0.02 ppm	NOT ESTAB.
04	IPEL-TWA: NOT ESTAB		IPEL-STEL: 1.0 mg/m3	

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB.
= NOT ESTABLISHED = NOT APPLICABLE]

Consult local authorities for acceptable provincial values.

SECTION 3 - TOXICOLOGICAL PROPERTIES

REF	LD50 ORAL (rat)	LD50 DERMAL (rabbit)	LC50 INHALATION (rat)
01	14.00 g/kg	Not available	Not available
02	4.30 g/kg	Not available	Not available
03	Not available	Not available	Not available
04	.71 g/kg	.57 g/kg	.31 mg/L. 4 h

THE FOLLOWING INFORMATION IS REQUIRED UNDER CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

REF	ACUTE TOXICITY
01	EYE IRRITANT
02	NO SEVERE HAZARDS
03	SKIN SENSITIZER/EYE IRRITANT
04	Toxic via dermal exposure./Toxic via inhalation./SKIN SENSITIZER

REF	CHRONIC TOXICITY
01	NO LONG-TERM EFFECTS IDENTIFIED
02	NO LONG-TERM EFFECTS IDENTIFIED
03	RESPIRATORY SENSITIZER
04	RESPIRATORY SENSITIZER/LUNG

HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes severe eye irritation.

SKIN CONTACT: May cause moderate skin irritation. May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION: Vapor and/or spray mist may be harmful if inhaled. May cause irritation and/or allergic respiratory reaction in lungs. Vapor irritates eyes, nose, and throat. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Do not use if you have chronic (long-term) lung or breathing problems, or if you have ever had a reaction to isocyanates.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. Prolonged inhalation
of an ingredient(s) in this product may cause lung sensitivity leading to pneumonitis. This product contains isocyanates. Inhalation may cause a burning

sensation of the nose, throat and lungs. Allergic respiratory reactions to these
materials are characterized by asthma-like symptoms such as chest tightness, wheezing, shortness of breath and coughing. These symptoms may follow repeated exposure or a single massive exposure and may be delayed.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Redness, itching, burning sensation and visual disturbances
may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Do not use if you have chronic (long-term) lung or breathing problems, or if you have ever had a reaction to isocyanates.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: Not available

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, do not induce vomiting. Gently wipe out inside mouth to
remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses, flush eye immediately with a gentle stream of warm water for at least 30 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE OR EXPLOSION DATA

FLASHPOINT: 91 Degrees F (32 Degrees C) (PENSKY-MARTENS CLOSED CUP)

FLAMMABLE LIMITS: Lower explosion limit (LEL): 1.4

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IC flammable liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible

autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

AUTOIGNITION TEMPERATURE: Not available

SECTION 6 - PREVENTIVE MEASURES

ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take
up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IC flammable liquids.

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear chemical-type splash goggles or full face shield when possibility exists for eye contact due to splashing or spraying liquid, airborne
particles, or vapors.

SKIN PROTECTION: Wear protective clothing sufficient to cover exposed skin surfaces. For applications where skin contact is likely and impermeable clothing
is necessary, select clothing constructed of: impermeable material. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Where vapors or overspray are present, use a NIOSH approved, positive-pressure, air- supplied respirator for the entire time of spraying and until all vapors and mists are gone. Follow the respirator manufacturer's directions for respirator use.

OTHER EQUIPMENT: Do not reuse contaminated clothing, shoes, or gloves.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation

in volume and pattern to keep the concentration of ingredients listed in Section
2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 7 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 255- 293Degrees F

SOLUBILITY IN WATER: .1 %

VAPOR PRESSURE: 6.3 mmHg

WEIGHT/GALLON (LBS): 10.6 (IMPERIAL)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 30.400

% SOLIDS BY WEIGHT: 75.00

SPECIFIC GRAVITY: 1.062

EVAPORATION RATE(BuOAc=100): 82

PHYSICAL STATE: LIQUID

FREEZING POINT: Not available

ODOR THRESHHOLD: Not available

COEFFICIENT OF OIL/WATER DISTRIBUTION: Not available

ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

SECTION 8 - STABILITY AND REACTIVITY DATA

This product is normally stable but may undergo hazardous reactions at extremely
high temperatures and pressures.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents. Avoid water and alcohols.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; hydrogen cyanide ; lower molecular weight polymer fractions; traces of
isocyanate ; oxides of nitrogen ; Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 9 - PREPARATION INFORMATION PREPARED BY: Product Safety Department PHONE
NUMBER: (412)492-5555 DATE OF MSDS PREPARATION: 01/19/98

Hazardous Materials Identification System (HMIS) and National Fire Protection

Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	3*	HEALTH	3
FLAMMABILITY	3	FLAMMABILITY	3
REACTIVITY	1	INSTABILITY	1

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: 95-869 (00081959.00295-869)

Manufactured and Supplied by:

PPG INDUSTRIES, EAST POINT

1377 OAKLEIGH DRIVE

EAST POINT, GA 30304

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MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 72-110

REVISION DATE: 03/17/98 (000) 0814

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: EXTERIOR FLAT LATEX - PASTEL BASE

CHEMICAL FAMILY: Acrylic

EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.) 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: 1-800-441-9695

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA
15101 (412) 492-5555

DATE OF MSDS PREPARATION: 04/14/98

PRIMARY HAZARD WARNING

Harmful if swallowed. May cause moderate skin irritation. Causes eye irritation.
Vapor and/or spray mist may be harmful if inhaled. Sanding and grinding dusts may be harmful if inhaled.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	ETHYLENE GLYCOL	1 - <5	107-21-1	
02	ZINC OXIDE	5 - <10	1314-13-2	
03	TITANIUM DIOXIDE	10- <20	13463-67-7	
04	SILICA CRISTOBALLITE	1 - <5	14464-46-1	I N O
05	QUARTZ	5 - <10	14808-60-7	I N O
06	ALUMINUM HYDROXIDE	1 - <5	21645-51-2	
07	DIATOMACEOUS EARTH	1 - <5	68855-54-9	
08	SILICA	1 - <5	7631-86-9	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 102 RQ (LBS)	SARA 302 TPQ (LBS)	SARA 313	SARA 311/312 AC	CH	FL	PR	RE
01	5000	NOT ESTAB	Y	Y	Y	N	N	N
02	NOT ESTAB	NOT ESTAB	Y	N	N	N	N	N
03	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N
04	NOT ESTAB	NOT ESTAB	N	N	Y	N	N	N
05	NOT ESTAB	NOT ESTAB	N	N	Y	N	N	N
06	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N
07	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N
08	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE= Y, CHRONIC= Y, FLAMMABILITY= N,
PRESSURE= N, REACTIVITY= N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH TLV-TWA	ACGIH TLV-STEL	U.S. OSHA PEL-TWA	U.S. OSHA PEL-STEL
01	C- 100 mg/m3	NOT ESTAB.	C- 50 ppm	NOT ESTAB.
02	10 mg/m3	10 mg/m3	R- 5 mg/m3	10 mg/m3
03	10 mg/m3	NOT ESTAB.	10 mg/m3	NOT ESTAB.
04	R- 0.05 mg/m3	NOT ESTAB.	R- 0.05 mg/m3	NOT ESTAB.
05	R- 0.1 mg/m3	NOT ESTAB.	R- 0.1 mg/m3	NOT ESTAB.
06	2 mg/m3	NOT ESTAB.	R- 5 mg/m3	NOT ESTAB.
07	R- 3 mg/m3	NOT ESTAB.	6 mg/m3	NOT ESTAB.
08	10 mg/m3	NOT ESTAB.	6 mg/m3	NOT ESTAB.

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB.
= NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or
are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes eye irritation.

SKIN CONTACT: May cause moderate skin irritation.

INHALATION: Vapor and/or spray mist may be harmful if inhaled. Sanding and grinding dusts may be harmful if inhaled.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. This product contains crystalline silica which has been classified as a human carcinogen by IARC. Long-term exposures may also lead to a disabling lung condition known as silicosis. The risk depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Use of appropriate personal protective equipment and/or engineering controls should be employed whenever these types of operations are being performed. Ingestion of products containing ethylene glycol may damage kidneys and liver and has been shown to cause birth defects in laboratory animals. No evidence of these effects has been found in

humans. This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure. Potential for inhalation of titanium dioxide dusts from coatings is very limited. Since overexposures are not expected, there is no significant hazard for man.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

WARNING: This product contains a chemical known to the State of California to cause cancer.

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, do not induce vomiting. Gently wipe out inside mouth to
remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT: Not applicable

FLAMMABLE LIMITS: Lower explosion limit (LEL): Not available

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use extinguishers appropriate for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: When this product is used, the overspray and
other combustible materials such as paint booth filters, rags, masking materials, etc., contaminated by coating material are subject to spontaneous combustion. Wetting the contaminated materials and not packing them tightly together in refuse containers will minimize the potential for this to occur. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when
this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take
up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 7 - HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F. (48 degrees C.).

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear safety glasses.

SKIN PROTECTION: Wear protective clothing. Gloves should be constructed of: impermeable material. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are
based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Where ventilation is inadequate, use a NIOSH- approved air purifying respirator with the appropriate chemical cartridges or positive-pressure, air-supplied respirator. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how
it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section
2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 212- 475Degrees F

SOLUBILITY IN WATER: 48.1 %

VAPOR PRESSURE: 17.3 mmHg

WEIGHT/GALLON (LBS): 11.07 (U.S.)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 61.300

% SOLIDS BY WEIGHT: 52.90

SPECIFIC GRAVITY: 1.328

EVAPORATION RATE(BuOAc=100): 34

ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

SECTION 10 - STABILITY AND REACTIVITY

This product is normally stable and will not undergo hazardous reactions.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: oxides of zinc ; oxides of aluminum ; carbon monoxide ; carbon dioxide ; lower molecular weight polymer fractions; Extreme heat includes, but is not limited to, flame cutting, brazing,
and welding.

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	1*	HEALTH	1
FLAMMABILITY	1	FLAMMABILITY	1
REACTIVITY	0	INSTABILITY	0

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: 72-110 (00111424.00172-110)

Manufactured and Supplied by:

ARCHITECTUAL FINISHES, INC.
ONE PPG PLACE
PITTSBURGH, PA 15272

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MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 97-725

REVISION DATE: 11/21/96 (001) 0814

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: THINNER

CHEMICAL FAMILY: SOLVENT BLEND

WHMIS HAZARD CLASS:

Class B, Division 2 Class D, Division 2, Subdivision A Class D, Division 2, Subdivision B

EMERGENCY MEDICAL/SPILL INFO: (514) 645-1320 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: (404) 761-7771

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA
15101 (412) 492-5555

DATE OF MSDS PREPARATION: 02/09/98

PRIMARY HAZARD WARNING

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. Harmful if swallowed. May cause moderate skin irritation.
Causes severe eye irritation. May be absorbed through the skin. Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM.

SECTION 2 - HAZARDOUS INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	ETHYL BENZENE	5 - 10	100-41-4	
02	TOLUENE	10 - 30	108-88-3	
03	XYLENES	15 - 40	1330-20-7	
04	2-PROPOXYETHANOL	10 - 30	2807-30-9	
05	ISOPROPYL ALCOHOL	5 - 10	67-63-0	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

	ACGIH		ONTARIO	
REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	100 ppm	125 ppm	100 ppm	125 ppm
02	S- 50 ppm	NOT ESTAB.	100 ppm	150 ppm
03	100 ppm	150 ppm	100 ppm	150 ppm
04	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
05	400 ppm	500 ppm	400 ppm	500 ppm

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB.
= NOT ESTABLISHED = NOT APPLICABLE]

Consult local authorities for acceptable provincial values.

SECTION 3 - TOXICOLOGICAL PROPERTIES

REF	LD50 ORAL (rat)	LD50 DERMAL (rabbit)	LC50 INHALATION (rat)
01	3.50 g/kg	17.80 g/kg	Not available
02	5.00 g/kg	12.12 g/kg	Not available
03	4.30 g/kg	Not available	Not available
04	Not available	1.34 g/kg	Not available
05	5.84 g/kg	13.00 g/kg	Not available

THE FOLLOWING INFORMATION IS REQUIRED UNDER CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

REF	ACUTE TOXICITY
01	NO SEVERE HAZARDS
02	NO SEVERE HAZARDS
03	NO SEVERE HAZARDS
04	EYE IRRITANT
05	NO SEVERE HAZARDS

REF	CHRONIC TOXICITY
01	CARCINOGEN/KIDNEY/LIVER/LUNG
02	TERATOGEN
03	NO LONG-TERM EFFECTS IDENTIFIED
04	BONE MARROW/BLOOD/KIDNEY/LIVER
05	NO LONG-TERM EFFECTS IDENTIFIED

HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes severe eye irritation.

SKIN CONTACT: May cause moderate skin irritation. May be absorbed through the skin.

INHALATION: Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Repeated exposure to high vapor concentrations may cause
irritation of the respiratory system and permanent brain and nervous system damage.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. This product contains an ethylene series glycol ether and/or acetate which has been shown to cause adverse effects on the kidneys, liver, blood and/or blood-forming tissue. This product contains toluene. Toluene inhalation in animals (greater than 1500

ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects. Ethylbenzene has been reported by NTP to cause cancer in laboratory animals following a chronic (2 year) inhalation exposure. Dose levels of 75, 250 and 750 ppm were used, with evidence of carcinogenicity found in the kidneys of rats and the lung and liver of mice at 750 ppm. The No Observed Effect Level (NOEL) was 75 ppm. The relevance of these findings to humans is uncertain, but appropriate safeguards should be employed to reduce or eliminate inhalation exposure to ethylbenzene.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Redness, itching, burning sensation and visual disturbances
may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: Not available

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, do not induce vomiting. Gently wipe out inside mouth to
remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE OR EXPLOSION DATA

FLASHPOINT: 60 Degrees F (15 Degrees C) (PENSKY-MARTENS CLOSED CUP)

FLAMMABLE LIMITS: Lower explosion limit (LEL): 1.4

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IB flammable liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray

may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

AUTOIGNITION TEMPERATURE: Not available

SECTION 6 - PREVENTIVE MEASURES

ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take
up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IB flammable liquids.

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN PROTECTION: Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: nitrile rubber or polyethylene. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH-approved
air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the
type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section
2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 7 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 180- 307Degrees F

SOLUBILITY IN WATER: 37.6 %

VAPOR PRESSURE: 11.2 mmHg

WEIGHT/GALLON (LBS): 8.7 (IMPERIAL)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 100.000

% SOLIDS BY WEIGHT: .00

SPECIFIC GRAVITY: .871

EVAPORATION RATE(BuOAc=100): 105

PHYSICAL STATE: LIQUID

FREEZING POINT: Not available

ODOR THRESHHOLD: Not available

COEFFICIENT OF OIL/WATER DISTRIBUTION: Not available

ODOR/APPEARANCE: Non-viscous liquid with an odor characteristic of the ingredients listed in Section 2.

SECTION 8 - STABILITY AND REACTIVITY DATA

This product is normally stable and will not undergo hazardous reactions.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 9 - PREPARATION INFORMATION PREPARED BY: Product Safety Department PHONE
NUMBER: (412)492-5555 DATE OF MSDS PREPARATION: 02/09/98

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating	NFPA Rating

ACTIVATOR FOR 333 = VG 6005, SECTION X PAGE 3

ACTIVATOR FOR 25P = VGY 511, SECTION X PAGE 3

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MSDS HPC 5
IMRON® ACTIVATORS, CLEARS & ADDITIVES
HIGH PERFORMANCE COATINGS
January 1, 1999

DUPONT

MATERIAL SAFETY DATA SHEET

IMRON® ACTIVATORS, CLEARS & ADDITIVES

Section I - Manufacturer

Manufacturer:
DuPont Co.
Automotive
Wilmington, Delaware 19898
Telephone:
Product information (800)441-7515
Medical emergency (800) 441-3637
Transportation emergency (800) 424-9300 (CHEMTREC)

Product: IMRON® Activators, Clears & Additives
OSHA Hazard Class: See Section X for specific data.
DOT Shipping Name: See DOT addendum.

Section II - Hazardous Ingredients (See Section X)

Ingredients CAS No.	Vapor Pressure (20°C, mm Hg)	Exposure Limits
Acrylic polymer-A Not Available	None	None-A,O
Acrylic polymer-B 104032-39-5	None	None-A,O
Acrylic polymer-C 90010-53-3	None	None-A,O
Aliphatic polyisocyanate resin 28182-81-2	None	0.5 mg/m³-S 1.0 mg/m³-S 15 min(STEL) None-A,O
Amorphous silica 7631-86-9	None	0.2 mg/m³-A Resp 15 mg/m³-O 5 mg/m³-O Resp 1 mg/m³-A 15 min(STEL)
Aromatic hydrocarbon 64742-95-6	10.0@ 25.0°C	None-A,O
Butyl acetate 123-86-4	8.0	150 ppm-A,O 200 ppm-A 15 min(STEL)
Cumene 98-82-8	3.7	50 ppm-A,O Skin
Dibutyl tin dilaurate 77-58-7	0.2@ 60.0°C	0.1 mg/m³-O as Sn 0.1 mg/m³-A Skin as Sn
Ethyl acetate 141-78-6	76.0	400 ppm-A,O
Ethylbenzene 100-41-4	7.0	100 ppm-A,O 125 ppm-A 15 min (STEL) 25 ppm-D 8&12 hr
Ethylene glycol monobutyl ether acetate 112-07-2	0.3	20 ppm-D Skin None-A,O
Hydrous magnesium silicate 14807-96-6	None	2.0 mg/m³-A Resp 0.5 mg/m³-D Resp None-O
Methyl amyl ketone 110-43-0	2.2	50 ppm-A 100 ppm-O
Methyl ethyl ketone 78-93-3	71.0	200 ppm A,O 300 ppm-A 15 min(STEL) 200 ppm-D 8&12 hr. TWA 300 ppm-D 15 min(STEL)
Mixed dibasic esters Not Available	0.2	None- A,O 10 mg/m³-D
Propylene glycol monomethyl ether acetate 108-65-6	3.7	10 ppm-D None-A,O
Silicone resin 9016-00-6	None	None-A,O
Toluene 108-88-3	36.7	50 ppm-A Skin 200 ppm-O 300 ppm-O Ceiling 500 ppm-O 10 min. MAX 50 ppm-D 8&12 hr. TWA
Xylene 1330-20-7	7 @ 25.0°C	100 ppm-A,O 150 ppm-A 15 min(STEL) 100 ppm-D 8&12 hr 150 ppm-D 15 min TWA
1,2,4-trimethyl benzene 95-63-6	7 @ 44.4°C	25 ppm-A,O
1,6-Hexamethylene diisocyanate 822-06-0	Unknown	5 ppb-A None-O
2(2'-hydroxy-3,5' -Diteramylphenyl)benzotriazole 25973-55-1	Unknown	None-A,O
2-(3',5' -bis(1-methyl-1-phenylethyl)-2'-hydroxyphenol)benzotriazole None	Unknown	None-A,O
2,4-Pentanedione 123-54-6	7.0	None-A,O 10 ppm-D

A = ACGIH TLV; O= OSHA; D = DuPont internal limit; S = Supplier Furnished limit; STEL = Short Term Exposure Limit; C = Ceiling.

Section III - Physical Data

Evaporation rate: Less than ether
Vapor Density: Heavier than air
Solubility in water: Miscible
Percent volatile by volume: 12.8% - 99.7%
Percent volatile by weight: 10.00% - 99.73%
Boiling range: 76°C - 225°C ;168°F - 437°F
Gallon weight: 7.21 - 11.54 lb/gallon

Section IV - Fire and Explosion Data

Flash point: See Section X for exact values.
Flammable limits: 0.8%- 11.5%
Extinguishing media: Universal aqueous film-forming 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: May result in gastrointestinal distress. In the unlikely event of ingestion, call a physician immediately and have the names of ingredients available. **DO NOT INDUCE VOMITING.**
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 respiratory sensitization. This effect may be permanent. 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 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:
Aliphatic Polyisocyanate Resin Repeated exposure may cause allergic skin rash, itching, swelling. May cause eye irritation with discomfort, tearing, or blurred vision. Repeated overexposure to isocyanates may cause lung injury, including a decrease in lung function, which may be permanent. 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. Individuals with preexisting lung disease, asthma or breathing difficulties may have increased susceptibility to the toxicity of excessive exposures. **Aromatic Hydrocarbon** 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. Tests for embryotoxic activity in animals has been inconclusive. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother. **Dibutyl Tin Dilaurate** Causes eye corrosion and permanent injury. Contact may cause skin burns. Can be absorbed through the skin in harmful amounts. **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. **Ethylbenzene** Recurrent overexposure may result in liver and kidney injury. Studies in laboratory animals have shown reproductive, embryotoxic and developmental effects. Has shown mutagenic activity in laboratory cell culture tests. Tests in some laboratory animals demonstrate carcinogenic activity. Individuals with preexisting diseases of the central nervous system, lungs, liver, or kidneys may have increased susceptibility to the toxicity of excessive exposures. **Ethylene Glycol Monobutyl Ether Acetate** Can be absorbed through the skin in harmful amounts. May destroy red blood cells. May cause abnormal kidney function. **Hydrous Magnesium Silicate** Repeated and prolonged overexposure to talc may lead to typical x-ray changes and chronic lung disease. **Methyl Amyl Ketone** Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. **Methyl Ethyl Ketone** High concentrations have caused embryotoxic effects in laboratory animals. Methyl ethyl ketone 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. **Mixed Dibasic Esters** High airborne levels in rats have shown mild injury to the olfactory region of the nose. **Propylene Glycol Monomethyl Ether Acetate** May cause moderate eye burning. Recurrent overexposure may result in liver and kidney injury. **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. Chromosomal changes in the circulating blood of exposed workers have been reported. The significance of these reports is unclear because of exposure to other substances. Individuals with preexisting diseases of the central nervous system may have increased susceptibility to the toxicity of excessive exposures. **WARNING:** This chemical is known to the State of California to cause birth defects or other reproductive harm. **Xylene** Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts. Individuals with pre-existing disease of the central nervous system, kidneys, liver, cardiovascular system, lungs, or bone marrow may have increased susceptibility to the toxicity of excessive exposures. Canada classifies Xylene as a developmental toxin as high exposures to xylenes in some animal studies have been reported to cause health effects on the developing fetus/embryo. These effects were often at levels toxic to the adult animal. The significance of these effects to humans is not known. **1,6-Hexamethylene Diisocyanate** May cause temporary upper respiratory and/or lung irritation with cough, difficult breathing, or shortness of breath. 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. 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. **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. No effect was seen at 100 ppm. The odor is disagreeable at a few ppm. Ingestion may result in gastric disturbances.

Section VI - Reactivity Data

Stability: Stable
Incompatibility (materials to avoid): Water, amines, metal salts
Hazardous decomposition products: CO, CO_2, smoke, and oxides of any heavy metals that are 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. Do not breathe vapors. Do not get in eyes and on skin. 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)

Confine and remove with inert absorbent. Pressure can be generated. Do not seal container. After 48 hours, material may be sealed and disposed of properly.

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 approved TC-19C) during the spray application (or brush or roll application in poorly ventilated areas) of this product and until all vapors and spray mist are exhausted. For mixing and for brush and roll application in well-ventilated areas, a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH TC-23C) may be used. Follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area.
Refer to the hardener/activator label instructions for further information.
Individuals with history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to this product if mixed with isocyanate activators/hardeners.
Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable exposure limits.
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 approved respirator or appropriate ventilation.

Section X - Other Information

PRODUCT CODE **INGREDIENTS** (See Section II)

VG-610 aliphatic polyisocyanate resin (74.73%), butyl acetate (6.91%), ethyl acetate (13.81%), ethylene glycol monobutyl ether acetate (4.31%*), 1,6-hexamethylene diisocyanate (.22%*)
GAL WT: 9.01 WT PCT SOLIDS: 74.98 VOL PCT SOLIDS: 69.99
SOLVENT DENSITY: 7.49 VOC LE: 2.3 VOC AP: 2.3 H:2 F:3
R:1 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

→ **VG-6005** aliphatic polyisocyanate resin (89.82%), aromatic hydrocarbon (3.15%), butyl acetate (5.00%), 1,2,4-trimethyl benzene (0-2%*), 1,6-hexamethylene diisocyanate (.18%*)
GAL WT: 9.41 WT PCT SOLIDS: 90.00 VOL PCT SOLIDS: 87.08
SOLVENT DENSITY: 7.28 VOC LE: 0.9 VOC AP: 0.9 H:3 F:2
R:1 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

VGF17761 ethylbenzene (2-6%*), silicone resin (18.74%), xylene (75-79%*)
GAL WT: 7.49 WT PCT SOLIDS: 18.74 VOL PCT SOLIDS: 15.32
SOLVENT DENSITY: 7.19 VOC LE: 6.1 VOC AP: 6.1 H:2 F:3
R:0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

VGM 6005 aliphatic polyisocyanate resin (89.82%), aromatic hydrocarbon (3.15%), butyl acetate (5.00%), 1,2,4-trimethyl benzene (0-2%*), 1,6-hexamethylene diisocyanate (.18%*)
GAL WT: 9.41 WT PCT SOLIDS: 90.00 VOL PCT SOLIDS: 87.08
SOLVENT DENSITY: 7.28 VOC LE: 0.9 VOC AP: 0.9 H:3 F:2
R:1 FLASH PT: BETWEEN 100 - 140 F (CC) OSHA STORAGE: II

→ **VGY 511** aliphatic polyisocyanate resin (38.98%), aromatic hydrocarbon (2.17%), butyl acetate (6.27%), ethyl acetate (13.20%), ethylbenzene (0-1%*), propylene glycol monomethyl ether acetate (18.12%), toluene (17.03%*), xylene (3-4%*)
GAL WT: 8.28 WT PCT SOLIDS: 39.07 VOL PCT SOLIDS: 33.06
SOLVENT DENSITY: 7.52 VOC LE: 5.0 VOC AP: 5.0 H:3 F:3
R:1 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

VGY-611 aliphatic polyisocyanate resin (74.76%), butyl acetate (6.90%), ethyl acetate (13.79%), ethylene glycol monobutyl ether acetate (4.31%*), 1,6-hexamethylene diisocyanate (.22%*)
GAL WT: 9.01 WT PCT SOLIDS: 74.98 VOL PCT SOLIDS: 69.92
SOLVENT DENSITY: 7.49 VOC LE: 2.3 VOC AP: 2.3 H:2 F:3
R:1 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

VGY 719 aliphatic polyisocyanate resin (32.67%), aromatic hydrocarbon (1.81%), butyl acetate (6.45%), ethyl acetate (56.33%), ethylbenzene (0-1%*), xylene (2-3%*)
GAL WT: 8.06 WT PCT SOLIDS: 32.74 VOL PCT SOLIDS: 27.06
SOLVENT DENSITY: 7.43 VOC LE: 5.4 VOC AP: 5.4 H:3 F:3
R:1 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

RT002P ethylbenzene (9-24%*), silicone resin (1.50%), xylene (75-89%*)
GAL WT: 7.21 WT PCT SOLIDS: 1.50 VOL PCT SOLIDS: 1.18
SOLVENT DENSITY: 7.19 VOC LE: 7.1 VOC AP: 7.1 H:2 F:3
R:0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

VH-Y-691 dibutyl tin dilaurate (1.55%*), ethyl acetate (98.44%),
GAL WT: 7.49 WT PCT SOLIDS: 1.56 VOL PCT SOLIDS: 1.39
SOLVENT DENSITY: 7.47 VOC LE: 7.4 VOC AP: 7.4 H:1 F:3
R:0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

189S 2,4-pentanedione (99.72%),
GAL WT: 8.12 WT PCT SOLIDS: 0.27 VOL PCT SOLIDS: 0.26
SOLVENT DENSITY: 8.12 VOC LE: 8.1 VOC AP: 8.1 H:2 F:3
R:0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

193S aliphatic polyisocyanate resin (74.76%), butyl acetate (6.90%), ethyl acetate (13.79%), ethylene glycol monobutyl ether acetate (4.31%*), 1,6-hexamethylene diisocyanate (.22%*)
GAL WT: 9.01 WT PCT SOLIDS: 74.98 VOL PCT SOLIDS: 69.92
SOLVENT DENSITY: 7.49 VOC LE: 2.3 VOC AP: 2.3 H:2 F:3
R:1 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

389S dibutyl tin dilaurate (1.00%*), 2,4-pentanedione (99.00%),
GAL WT: 8.13 WT PCT SOLIDS: 1.00 VOL PCT SOLIDS: 0.94
SOLVENT DENSITY: 8.13 VOC LE: 8.0 VOC AP: 8.0 H:2 F:3
R:0 FLASH PT: BETWEEN 73 - 100 F (CC) OSHA STORAGE: IC

610P acrylic polymer-a (2.94%), acrylic polymer-b (47.01%), aromatic hydrocarbon (8.89%), butyl acetate (7.31%), cumene (0-1%*), ethylbenzene (0-2%*), ethylene glycol monobutyl ether acetate (4.56%*), methyl ethyl ketone (13.86%*), xylene (4-6%*), 1,2,4-trimethyl benzene (1-6%*), 2-(3',5'-bis(1-methyl-1-phenylethyl)-2'-(1.18%)
GAL WT: 8.08 WT PCT SOLIDS: 52.79 VOL PCT SOLIDS: 46.26
SOLVENT DENSITY: 7.10 VOC LE: 3.8 VOC AP: 3.8 H:2 F:3
R:0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

611P acrylic polymer-a (1.91%), acrylic polymer-b (48.55%), butyl acetate (4.33%), ethylene glycol monobutyl ether acetate (2.51%*), methyl amyl ketone (24.42%), methyl ethyl ketone (2.90%*), mixed dibasic esters (5.39%), toluene (4.84%*), xylene (0-1%*), 2(2'-hydroxy-3,5'-diteramylphenyl)benzotriazole (1.32%)
GAL WT: 8.12 WT PCT SOLIDS: 59.36 VOL PCT SOLIDS: 47.03
SOLVENT DENSITY: 7.15 VOC LE: 3.8 VOC AP: 3.8 H:2 F:3
R:0 FLASH PT: BETWEEN 20 - 73 F (CC) OSHA STORAGE: IB

613P acrylic polymer-a (1.36%), acrylic polymer-b (34.56%), amorphous silica (21.37%), butyl acetate (3.08%), ethylene glycol monobutyl ether acetate (1.78%*), methyl amyl ketone (18.95%),

methyl ethyl ketone (7.63%*), mixed dibasic esters (3.83%), toluene (2.99%*), xylene (0-1%*)
GAL WT: 9.02 WT PCT SOLIDS: 59.47 VOL PCT SOLIDS: 48.27
SOLVENT DENSITY: 7.07 VOC LE: 3.7 VOC AP: 3.7 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB
731P acrylic polymer-c (8.41%), hydrous magnesium silicate (51.00%), methyl ethyl ketone (19.28%*), propylene glycol monomethyl ether acetate (20.49%)
GAL WT: 11.54 WT PCT SOLIDS: 59.41 VOL PCT SOLIDS: 35.79
SOLVENT DENSITY: 7.29 VOC LE: 4.7 VOC AP: 4.7 H:2 F:3
R:0 FLASH PT: BETWEEN 20-73 F (CC) OSHA STORAGE: IB

Section 313 Supplier Notification: The chemicals listed above with an asterisk preceeding the percentage are subject to the reporting requirements of Section 313 of the Emergency Planning and Right-To-Know Act of 1986 and of 40 CFR 372.

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.

Product Manager - High Performance Coatings

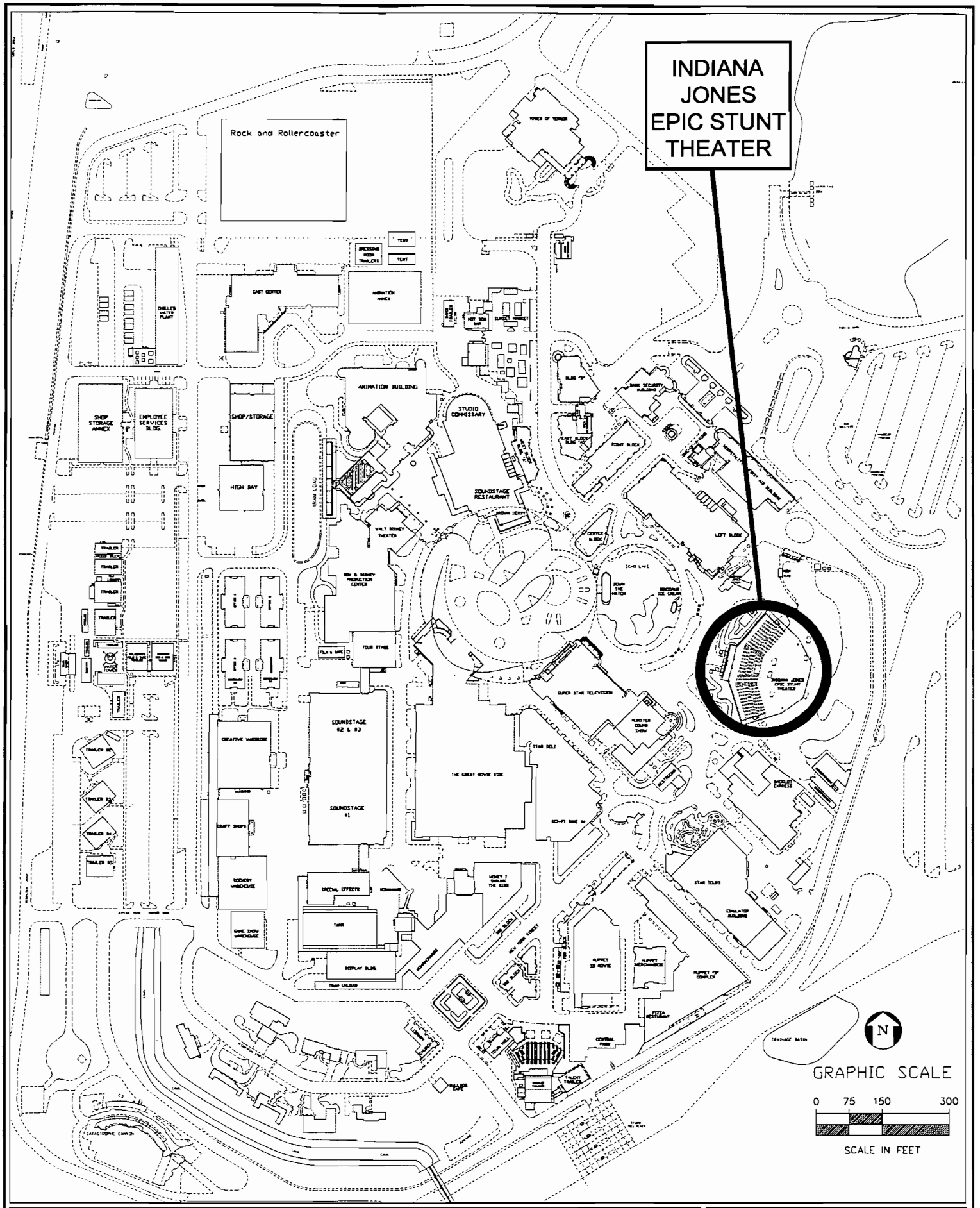
January 1, 1999
Prepared by D. G. Detweiler

H-51568/E-P0100

IIPC 5

ATTACHMENT B

FACILITY PLOT PLAN



ATTACHMENT B
FACILITY PLOT PLAN
DISNEY-MGM STUDIOS EPIC STUNT THEATER REHAB

Walt Disney World Co.

ATTACHMENT C

SIGNATURES

Owner/Authorized Representative or Responsible Official

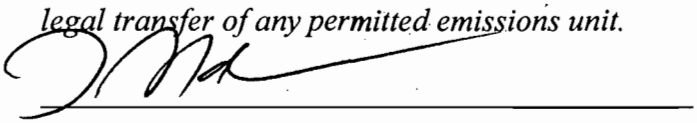
1. Name and Title of Owner/Authorized Representative or Responsible Official:
   Lee Schmudde, Vice President

2. Owner/Authorized Representative or Responsible Official Mailing Address:
   Organization/Firm: Walt Disney World Co.
   Street Address: PO Box 10000
   City: Lake Buena Vista State: Florida Zip Code: 32830-1000

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: (407) 828-3701 Fax: (407) 828-3239

4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [ ], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*



Signature

11-15-99

Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: Robert Beaver
   Registration Number: 32528

2. Professional Engineer Mailing Address:
   Organization/Firm: Walt Disney World Co.
   Street Address: PO Box 10000
   City: Lake Buena Vista State: Florida Zip Code: 32830-1000

3. Professional Engineer Telephone Numbers:
   Telephone: (407) 828-1584 Fax: (407) 934-7297

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [ ], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

11/18/99
Date

(seal)

* Attach any exception to certification statement.