

**MATERIAL SAFETY DATA SHEET**  
**COATINGS AND RESINS GROUP**  
**PPG Industries, Inc.**

DAU MSDS #1

**SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION**

**PRODUCT CODE/IDENTITY:** DAU  
**REVISION DATE:** 11/30/87 (T) 0808  
**CUSTOMER PART #/NAME:** Not applicable  
**PRODUCT TRADE NAME:** DELTRON ACRYLIC URETHANE  
**CHEMICAL FAMILY:** ACRYLIC  
**EMERGENCY MEDICAL/SPILL INFO:** (304) 643-1300 (U.S.)  
 91-800-06-214 (MEXICO)  
 (614) 363-9810  
**TECHNICAL INFORMATION:**  
**PRODUCT SAFETY/MSDS INFORMATION:** 4325 ROSANNA DRIVE, P.O. BOX 9  
 ALLISON PARK, PA 15101  
 (412) 482-8565  
**DATE OF MSDS PREPARATION:** 12/01/87

**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 until all vapors/odors are gone. Harmful if swallowed. May cause skin burns. Causes severe eye irritation. May be harmful if absorbed through the skin. 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 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	MAX %	CAS NUMBER	CARCINOGEN*
01	ETHYL BENZENE	0.1 - <1	100-41-4	
02	2-ETHYLHEXYL ACRYLATE	0.1 - <1	103-11-7	
03	TOLUENE	10 - <20	108-88-3	
04	ACETYLACETONE	1 - <5	123-54-6	
05	N-BUTYL ACETATE	40 - <50	123-86-4	
06	XYLENES	1 - <5	1330-20-7	
07	TITANIUM DIOXIDE	30 - <40	13463-67-7	
08	NAPHTHA	1 - <5	64742-99-6	
09	AROMATIC NAPHTHA	1 - <5	64742-99-6	
10	METHYL ETHYL KETONE	3 - <10	78-93-3	
11	NAPHTHA	1 - <5	8052-41-3	
12	1,2,4-TRIMETHYL BENZENE	1 - <5	95-63-6	

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

**SARA TITLE III & CERCLA CLASSIFICATIONS**

REF	SARA 311/312			
	SARA 302 RQ (LBS)	SARA 302 TPO (LBS)	SARA 313	AC CH FL PR RE
01	1000	NOT ESTAB	Y	Y Y Y N N
02	NOT ESTAB	NOT ESTAB	N	Y Y Y N Y
03	1000	NOT ESTAB	Y	Y N Y N N
04	NOT ESTAB	NOT ESTAB	N	Y N Y N N
05	5000	NOT ESTAB	N	Y N Y N N
06	100	NOT ESTAB	Y	Y N Y N N
07	NOT ESTAB	NOT ESTAB	N	N N N N N
08	NOT ESTAB	NOT ESTAB	N	Y N Y N N
09	NOT ESTAB	NOT ESTAB	N	Y N Y N N
10	5000	NOT ESTAB	Y	Y N Y N N
11	NOT ESTAB	NOT ESTAB	N	Y N Y N N
12	NOT ESTAB	NOT ESTAB	Y	Y N Y N N

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

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH				U.S. OSHA	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL	PEL-TWA	PEL-STEL
01	100 ppm	125 ppm	100 ppm	125 ppm		
02	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB		
03	5-10 ppm	NOT ESTAB	100 ppm	150 ppm		
04	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB		
05	150 ppm	200 ppm	150 ppm	200 ppm		
06	100 ppm	150 ppm	100 ppm	150 ppm		
07	10 mg/m3	NOT ESTAB	10 mg/m3	NOT ESTAB		

08	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB
09	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB
10	200 ppm	300 ppm	200 ppm	300 ppm
10	PEL-TWA	NOT ESTAB	PEL-STEL	200 ppm
11	100 ppm	NOT ESTAB	100 ppm	NOT ESTAB
17	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB

IC - 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 severe eye irritation.
- SKIN CONTACT:** May cause skin burns. May be harmful if absorbed through the skin.
- 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. 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 2-ethyl hexyl acrylate which has caused skin cancer in laboratory animals after chronic skin painting studies. This product contains methyl ethyl ketone (MEK). MEK has been shown to cause minor embryotoxic/teratotoxic effects in laboratory animals exposed for prolonged periods at high concentrations via inhalation. The potential for human exposure to high concentrations is expected to be low due to the irritating effects of MEK at low concentrations. 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. This product contains 2,4-pentadione. Animals repeatedly inhaling high concentrations (up to 650 ppm) had the following toxic effects: decreased body weight, nasal lining thickening, anemia, bradycardia, degeneration and death (650 ppm level only). The low odor threshold, unpleasant odor and nauseating effects at levels of a few ppm should provide adequate warning to prevent overexposure in the workplace. 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

**WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**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 lukewarm 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 waterless hand cleaner and soap and water if the material appears to adhere to skin.



Manufactured and Supplied by:  
 PPG INDUSTRIES, DELAWARE  
 760 PITTSBURGH DRIVE DELAWARE, OH 43015

**INHALATION:** If effected 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.

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

**SECTION 8: FIRE FIGHTING MEASURES**

**FLASHPOINT:** 72 Degrees F ( 22 Degrees C) (PENSKY-MARTENS CLOSED CUP)  
**FLAMMABLE LIMITS:** Lower explosion limit (LEL): 1.5  
 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 1B 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.

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: DAU (00058072.002DAU )

**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 absorbent 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.). Store large quantities in buildings designed and protected for storage of NFPA Class 1B 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.

**SECTION 8: 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: neoprene rubber or 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 9: PHYSICAL AND CHEMICAL PROPERTIES**

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

**BOILING RANGE:** 172- 417 Degrees F      **SOLUBILITY IN WATER:** 2.8 %  
**VAPOR PRESSURE:** 18.8 mmHg      **WEIGHT/GALLON (LBS):** 9.50 (U.S.)  
**VAPOR DENSITY:** Heavier than air      **pH:** Not applicable  
**% VOLATILE/VOLUME:** 51-61      **% SOLIDS BY WEIGHT:** 46-67  
**SPECIFIC GRAVITY:** 1.140      **EVAPORATION RATE (BUDAC = 100):** 173  
**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.

**COMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):** Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** May produce the following hazardous



Manufactured and Supplied by:  
 PPG INDUSTRIES, DELAWARE  
 760 PITTSBURGH DRIVE DELAWARE, OH 43015

# MATERIAL SAFETY DATA SHEET

## COATINGS AND RESINS GROUP

### PPG Industries, Inc.

**SECTION 1: CHEMICAL, PRODUCT, AND COMPANY INFORMATION**

**PRODUCT CODE/IDENTITY:** DAU2  
**REVISION DATE:** 10/14/86 (0001 0808)  
**CUSTOMER PART #/NAME:**  
**PRODUCT TRADE NAME:** ACRYLIC URETHANE CATALYST  
**CHEMICAL FAMILY:** POLYISOCYANATE  
**EMERGENCY MEDICAL/SPILL INFO:** (304) 843-1300 (U.S.)  
 81-800-00-214 (MEXICO)  
**TECHNICAL INFORMATION:** 14401 872-2800  
**PRODUCT SAFETY/MEDS INFORMATION:** 4326 ROSANNA DRIVE, P.O. BOX 8  
 ALLISON PARK, PA 15101  
 (412) 482-5500  
**DATE OF MSDS PREPARATION:** 02/28/88

**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 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*
D1	1-METHOXY-2-PROPYL ACETATE	10- <40	106-65-6	
D2	TOLUENE	10- <20	108-88-3	
D3	N-BUTYL ACETATE	10- <20	123-66-7	
D4	ETHYL ACETATE	5- <10	141-78-6	
D5	POLYISOCYANATE	20- <30	30228-07-0	
D6	ISOPHORONE DIISOCYANATE	2.1- <1	4095-11-9	
D7	M AND P NAPHTH-	5- <10	8032-32-4	

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

**SARA TITLE III & CERCLA CLASSIFICATIONS**

REF	SARA 302 (LBS)	SARA 302 (LBS)	SARA 313	SARA 311/312
D1	NOT ESTAB	NOT ESTAB	N	Y, N, N, N
D2	1000	NOT ESTAB	-	Y, N, N, N
D3	5000	NOT ESTAB	N	Y, N, N, N
D4	5000	NOT ESTAB	N	Y, N, N, N
D5	NOT ESTAB	NOT ESTAB	N	Y, N, N, N
D6	NOT ESTAB	100	-	Y, N, N, N
D7	NOT ESTAB	NOT ESTAB	N	Y, N, N, N

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

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH		U.S. OSHA	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
D1	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB
D2	PEL-TWA: 100 ppm	NOT ESTAB	100 ppm	150 ppm
D3	150 ppm	300 ppm	150 ppm	200 ppm
D4	400 ppm	NOT ESTAB.	400 ppm	NOT ESTAB.
D5	NOT ESTAB	NOT ESTAB	NOT ESTAB.	NOT ESTAB
D6	0.005 ppm	NOT ESTAB	5- 0.005 ppm	0.005 ppm
D7	300 ppm	NOT ESTAB	300 ppm	400 ppm

(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 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. 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. This product contains toluene. Toluene inhalation in animals (greater than 500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects.

**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.

**WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**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 lukewarm 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:** 64 Degrees F (18 Degrees C) (PENSKY-MARTENS CLOSED CUP)
- FLAMMABLE LIMITS:** Lower explosion limit (LEL): 1.7
- 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 B flammable liquid fires.
- UNUSUAL FIRE AND EXPLOSION HAZARDS:** Keep this product away from heat, sparks, flames, 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.



Manufactured and Supplied by:  
 REFINISH PRODUCTS  
 19899 PROGRESS DRIVE STRONGSVILLE, OH 44136

**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 absorbent 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.). Store large quantities in buildings designed and protected for storage of NFPA Class 1B 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.

**SECTION 8 - 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 neoprene rubber or 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:** 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 9 - PHYSICAL AND CHEMICAL PROPERTIES:**

**(FORMULA VALUES, NOT SALES SPECIFICATIONS)**

BUILDING RANGE: 167 - 302 Degrees F	SOLUBILITY IN WATER: 8.8 %
VAPOR PRESSURE: 20.9 mmHg	WEIGHT/GALLON (LBS): 7.89 (U.S.)
VAPOR DENSITY: Heavier than air	pH: Not applicable
% VOLATILE/VOLUME: 80.580	% SOLIDS BY WEIGHT: 22.86
SPECIFIC GRAVITY: .940	EVAPORATION RATE(BuOAc = 100): 1.67
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 but may undergo hazardous reactions at extremely high temperatures and pressures.

• **INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):** Avoid contact with strong alkalis, 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.

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

HMIS Rating		NFPA Rating	
.....		.....	
HEALTH	2*	HEALTH	2
FLAMMABILITY	3	FLAMMABILITY	3
REACTIVITY	3	INSTABILITY	3

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: DAU2 100056720.005DAU2 1



# MATERIAL SAFETY DATA SHEET

## COATINGS AND RESINS GROUP

### PPG Industries, Inc.

**SECTION 1: CHEMICAL, PRODUCT AND COMPANY INFORMATION**

PRODUCT CODE/IDENTITY: **DZ3**  
 REVISION DATE: **01/13/98 10001 0808**  
 CUSTOMER PART #/NAME:  
 PRODUCT TRADE NAME: **PRIMER SURFACER LT GRAY**  
 CHEMICAL FAMILY: **Acrylic**  
 EMERGENCY MEDICAL/SPILL INFO: **(304) 842-1200 (U.S.)  
 01-800-00-214 (MEXICO)**  
 TECHNICAL INFORMATION: **(440) 572-2800**  
 PRODUCT SAFETY/MSDS INFORMATION: **4325 ROSANNA DRIVE, P.O. BOX 9  
 ALLISON PARK, PA 15101  
 (412) 492-5555**  
 DATE OF MSDS PREPARATION: **03/18/98**

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 2: HAZARD 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 the respiratory system and permanent brain and nervous system damage.
- CHRONIC OVEREXPOSURE:** Avoid long-term and repeated contact. 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 this pigment indicate no increased risk of cancer from exposure. Potential for inhalation titanium dioxide dusts from coatings is very limited. Since overexposures are not expected, there is no significant hazard for man. This product contains methyl ethyl ketone (MEK). MEK has been shown to cause minor embryotoxic/teratogenic effects in laboratory animals exposed for prolonged periods at high concentrations via inhalation. The potential for human exposure to high concentrations is expected to be low due to irritating effects of MEK at low concentrations. 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. This product contains talc. In a lifetime inhalation study female rats exposed to 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 a carcinogen based on this data. This product contains carbon black which has been classified a 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 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 ethylbenzene.

**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 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 3: COMPOSITION INFORMATION ON INGREDIENTS**

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	ETHYL BENZENE	1 - <5	100-41-4	
02	TOLUENE	20 - <30	108-88-3	
03	METHYL ACETATE	1 - <5	123-86-4	
04	XYLENES	5 - <10	1330-20-7	
05	CARBON BLACK	0.1 - <1	1333-86-4	I
06	TITANIUM DIOXIDE	1 - <5	13463-67-7	
07	TALC	20 - <30	14807-96-6	
08	BARIUM SULFATE	1 - <5	7727-43-7	
09	METHYL ETHYL KETONE	5 - <10	78-93-3	

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

**SARA TITLE III & CERCLA CLASSIFICATIONS**

REF	SARA 311/312			
	SARA 102 RU (LBS)	SARA 302 TPQ (LBS)	SARA 313	AC CH FL PR RE
01	1000	NOT ESTAB	Y	Y Y Y N N
02	1000	NOT ESTAB	Y	Y N Y H N
03	5000	NOT ESTAB	N	Y N Y N N
04	100	NOT ESTAB	Y	Y N Y 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	Y	N N N N N
09	5000	NOT ESTAB	Y	Y N Y N N

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

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH		U.S. OSHA	
	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	150 ppm	200 ppm	150 ppm	200 ppm
04	100 ppm	150 ppm	100 ppm	150 ppm
05	3.5 mg/m3	NOT ESTAB	3.5 mg/m3	NOT ESTAB
06	10 mg/m3	NOT ESTAB	10 mg/m3	NOT ESTAB
07	R- 2 mg/m3	NOT ESTAB	R- 2 mg/m3	NOT ESTAB
08	10 mg/m3	NOT ESTAB	R- 5 mg/m3	NOT ESTAB
09	200 ppm	300 ppm	200 ppm	300 ppm
09	IPEL-TWA	NOT ESTAB	IPEL-STEL	250 ppm

(C - Ceiling Limit; S - Potential Skin Absorption; R - Respirable Dust) [NOT ESTAB. = NOT

**SIGNS AND SYMPTOMS OF OVEREXPOSURE:** Eye watering, headaches, nasal 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. 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 birth defects or other reproductive harm.

**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 lukewarm 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. Artificial respiration and other support measures as required.
- OTHER:** If ingestion, any type of overexposure or symptoms of overexposure occur or following the use of this product, contact a poison control center, emergency room physician immediately; have Material Safety Data Sheet information available.

**SECTION 5: FIRE FIGHTING MEASURES**

- FLASHPOINT:** 40 Degrees F (4 Degrees C) (PENNY MARTENS CLOSED CUP)
- FLAMMABLE LIMITS:** Lower explosion limit (LEL): 1.5
- Upper explosion limit (UEL):** Not available



Manufactured and Supplied by:  
 REFINISH PRODUCTS  
 19699 PROGRESS DRIVE STRONGSVILLE, OH 44136

**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 B flammable liquid fires.

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: DZ3 (00100065,002DZ3 )

**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.

**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 absorbent 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.). Store large quantities in buildings designed and protected for storage of NFPA Class B 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.

**SECTION 8: 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: neoprene rubber or nitrile rubber. No specific permeation/degradation testing has 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 9: PHYSICAL AND CHEMICAL PROPERTIES**

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

BOILING RANGE: 149- 293 Degrees F SOLUBILITY IN WATER: 2.7 %  
 VAPOR PRESSURE: 28.8 mmHg WEIGHT/GALLON (LBS): 10.42 (U.S.)  
 VAPOR DENSITY: Heavier than air pH: Not applicable  
 % VOLATILE/VOLUME: 61.120 % SOLIDS BY WEIGHT: 58.07  
 SPECIFIC GRAVITY: 1.250 EVAPORATION RATE(BuOAc=100): 271  
 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: carbon monoxide ; carbon dioxide ; lower molecular weight polymer fractions; oxides of barium ; Oxides of sulfur ; 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 2*	HEALTH 3
FLAMMABILITY 3	FLAMMABILITY 3
REACTIVITY 0	INSTABILITY 0



Manufactured and Supplied by:  
 REFINISH PRODUCTS  
 19699 PROGRESS DRIVE STRONGSVILLE, OH 44136

# MATERIAL SAFETY DATA SHEET

## COATINGS AND RESINS GROUP

### PPG Industries, Inc.

**SECTION 1: CHEMICAL, PRODUCT, AND COMPANY INFORMATION**

PRODUCT CODE/IDENTITY: DTL16  
 REVISION DATE: 09/02/97 (000) 0508  
 CUSTOMER PART #/NAME:  
 PRODUCT TRADE NAME: ACRYLIC LACQUER THINNER  
 CHEMICAL FAMILY: SOLVENT  
 EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.)  
 91-800-00-214 (MEXICO)  
 (440) 572-2800  
 TECHNICAL INFORMATION:  
 PRODUCT SAFETY/MSDS INFORMATION: 4328 ROSANNA DRIVE, P.O. BOX 9  
 ALLISON PARK, PA 15101  
 (412) 492-5655  
 DATE OF MSDS PREPARATION: 03/03/98

**SECTION 2: HAZARD IDENTIFICATION**

**EXTREMELY FLAMMABLE:** Vapors may cause flash fires. 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. 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 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 3: COMPOSITION/INFORMATION ON INGREDIENTS**

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	ETHYL BENZENE	1 - <5	100-41-4	
02	1 METHOXY 2 PROPYL ACETATE	> - <10	108-65-6	
03	TOLUENE	20 - <30	108-88-3	
04	XYLENES	10 - <20	1330-20-7	
05	PETROLEUM DISTILLATES	10 - <20	64741-84-0	
06	ISOPROPYL ALCOHOL	5 - <10	67-63-0	
07	ACETONE	20 - <30	67-64-1	

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

**SARA TITLE III & CERCLA CLASSIFICATIONS**

REF	SARA 102 RQ (LBS)		SARA 302 TPO (LBS)		SARA 313		SARA 311/312			
	AC	CH	FL	PR	RE	AC	CH	FL	PR	RE
01	1000	NOT ESTAB	Y	Y	Y	Y	N	N	N	N
02	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N	N	N
03	1000	NOT ESTAB	Y	Y	N	Y	N	N	N	N
04	100	NOT ESTAB	Y	Y	N	Y	N	N	N	N
05	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N	N	N
06	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N	N	N
07	5000	NOT ESTAB	Y	Y	N	Y	N	N	N	N

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

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH		U.S. OSHA	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	100 ppm	125 ppm	100 ppm	125 ppm
02	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB
03	IPEL-TWA	100 ppm	IPEL-STEL	NOT ESTAB
04	5- 50 ppm	NOT ESTAB	100 ppm	150 ppm
05	100 ppm	150 ppm	100 ppm	150 ppm
06	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB
07	400 ppm	500 ppm	400 ppm	500 ppm
07	500 ppm	750 ppm	750 ppm	1000 ppm
	IPEL-TWA	500 ppm	PEL-STEL	750 ppm

IC - 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 4: HAZARD 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 toluene. Toluene inhalation in animals (greater than 1500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fatal 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

**WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**SECTION 5: 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 lukewarm 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 6: FIRE FIGHTING MEASURES**

- FLASHPOINT:** 11 Degrees F (-12 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 B 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.

**SECTION 7: ACCIDENTAL RELEASE MEASURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Provide maximum



Manufactured and Supplied by:  
 REFINISH PRODUCTS  
 19699 PROGRESS DRIVE STRONGSVILLE, OH 44136

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 absorbent 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.). 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.

**SECTION 8: 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 latex. 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 9: PHYSICAL AND CHEMICAL PROPERTIES**

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

BOILING RANGE: 133-303 Degrees F SOLUBILITY IN WATER: 40.4 %  
 VAPOR PRESSURE: 6.7 mmHg WEIGHT/GALLON (LBS): 6.67 (U.S.)  
 VAPOR DENSITY: Heavier than air pH: Not applicable  
 % VOLATILE/VOLUME: 100.000 % SOLIDS BY WEIGHT: .00  
 SPECIFIC GRAVITY: .800 EVAPORATION RATE (BuOAc = 100): 580  
 ODOR/APPEARANCE: Non-viscous liquid with an odor characteristic of the ingredients 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 alkalis, 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.

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

HMIS Rating	NFPA Rating
HEALTH 2*	HEALTH 2
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: DTL16 (00076823.006DTL16 )





**MATERIAL SAFETY DATA SHEET**  
**COATINGS AND RESINS GROUP**  
**PPG Industries, Inc.**

**SECTION 1: CHEMICAL, PRODUCT, AND COMPANY INFORMATION**

**PRODUCT CODE/IDENTITY:** DX330  
**REVISION DATE:** 10/14/88 (000) 0808  
**CUSTOMER PART #/NAME:**  
**PRODUCT TRADE NAME:** WAX & GREASE REMOVER  
**CHEMICAL FAMILY:** SOLVENT  
**EMERGENCY MEDICAL/SPILL INFO:** (304) 843-1300 (U.S.)  
 91-800-36-214 (MEXICO)  
**TECHNICAL INFORMATION:** (440) 572-2800  
**PRODUCT SAFETY/MEDS INFORMATION:** 4325 ROSANNA DRIVE, P.O. BOX 9  
 ALLISON PARK, PA 15101  
 (412) 492-9555  
**DATE OF MSDS PREPARATION:** 03/12/88

**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 slight 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 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	METHYLCYCLOHEXANE	5 - <10	108-87-2	
02	TOLUENE	1 - <5	108-88-3	
03	N-HEPTANE	5 - <10	142-82-5	
04	NAPHTHA	70 - <80	64742-48-9	
05	NAPHTHA	5 - <10	64747-09-1	

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

**SARA TITLE III & CERCLA CLASSIFICATIONS**

REF	SARA 102 RQ (LBS)		SARA 313		SARA 311/312	
	AC	CH	FL	PR	RE	RE
01	NOT ESTAB	NOT ESTAB	N	Y	N	N
02	1000	NOT ESTAB	Y	Y	N	N
03	NOT ESTAB	NOT ESTAB	N	Y	N	N
04	NOT ESTAB	NOT ESTAB	N	Y	N	N
05	NOT ESTAB	NOT ESTAB	N	Y	N	N

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

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH		U.S. OSHA	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	400 ppm	NOT ESTAB	400 ppm	NOT ESTAB
02	S- 50 ppm	NOT ESTAB	100 ppm	150 ppm
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

(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 slight 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 the respiratory system and permanent brain and nervous system damage.
- **CHRONIC OVEREXPOSURE:** Avoid long-term and repeated contact. 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.
- **SIGNS AND SYMPTOMS OF OVEREXPOSURE:** Eye watering, headaches, nose 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/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.

**WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**SECTION 4: FIRE/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 lukewarm 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. App artificial respiration and other support measures as required.
- **OTHER:** If ingestion, any type of overexposure or symptoms of overexposure occur after following the use of this product, contact a poison control center, emergency room physician immediately; have Material Safety Data Sheet information available.

**SECTION 5: FIRE FIGHTING MEASURES**

- **FLASHPOINT:** 60 Degrees F ( 15 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 B flammable liquid fires.
- **UNUSUAL FIRE AND EXPLOSION HAZARDS:** Keep this product away from heat, sparks, flames, 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 explode when overheated. Do not apply to hot surfaces. Toxic gases may form when 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 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 absorbent 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 container 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). Store large quantities in buildings designed and protected for storage of NFPA Class B 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 next



Manufactured and Supplied by:  
**REFINISH PRODUCTS**  
 18699 PROGRESS DRIVE STRONGSVILLE, OH 44136

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 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: neoprene rubber or 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 9: PHYSICAL AND CHEMICAL PROPERTIES**

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

BOILING RANGE: 188- 351 Degrees F      SOLUBILITY IN WATER: 0 %  
 VAPOR PRESSURE: 18.2 mmHg      WEIGHT/GALLON (LBS): 6.36 (U.S.)  
 VAPOR DENSITY: Heavier than air      pH: Not applicable  
 % VOLATILE/VOLUME: 100.000      % SOLIDS BY WEIGHT: .00  
 SPECIFIC GRAVITY: .783      EVAPORATION RATE(BuOAc = 100): 75  
 ODOR/APPEARANCE: Non-viscous liquid with an odor characteristic of the ingredients 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 alkalis, 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.

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

HMIS Rating	NFPA Rating
HEALTH 2	HEALTH 2
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: DX330 (00052535.011DX330 )

