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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:** R748Z74  
**REVISION DATE:** 07/29/97 (000) 0819  
**CUSTOMER PART #/NAME:**  
**PRODUCT TRADE NAME:** DURETHANE UV TOPCOAT  
**CHEMICAL FAMILY:** ACRYLATE  
**EMERGENCY MEDICAL/SPILL INFO:** (304) 843-1300 (U.S.)  
91-800-00-214 (MEXICO)  
**TECHNICAL INFORMATION:** (414) 764-6000  
**PRODUCT SAFETY/MSDS INFORMATION:** 4325 ROSANNA DRIVE, P.O. BOX 9  
ALLISON PARK, PA 15101  
(412) 492-5555  
**DATE OF MSDS PREPARATION:** 02/11/98

**PRIMARY HAZARD WARNING**

Combustible. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Reacts strongly with water generating large amounts of heat. Harmful if swallowed. May cause skin burns. Causes severe eye irritation. May be harmful if 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. Vapor generated at elevated temperatures 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.



Manufactured and Supplied by:  
PPG INDUSTRIES, OAK CREEK  
10800 SOUTH 13th STREET OAK CREEK, WI 53154

**SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS**

HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01 AMORPHOUS SILICA	1 - <5	112926-00-8	
02 HEXAMETHYLENE DIACRYLATE	10- <20	13048-33-4	
03 ISODECYL ACRYLATE	5 - <10	1330-61-6	
04 N.J. TRADE SECRET #80100337-5010	10- <20	PROPRIETARY	
05 DIACRYLATE MONOMER	10- <20	42978-66-5	
06 PHOTOINITIATOR	1 - <5	7473-98-5	
07 N-VINYL PYRROLIDONE	5 - <10	88-12-0	

\* 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	NOT ESTAB	NOT ESTAB	N	N	N	N	N
02	NOT ESTAB	NOT ESTAB	N	Y	N	N	Y
03	NOT ESTAB	NOT ESTAB	N	Y	N	N	N
04	NOT ESTAB	NOT ESTAB	N	Y	N	N	Y
05	NOT ESTAB	NOT ESTAB	N	Y	N	N	Y
06	NOT ESTAB	NOT ESTAB	N	Y	N	N	N
07	NOT ESTAB	NOT ESTAB	N	Y	Y	N	N

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

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH		U.S. OSHA	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
	10 mg/m3	NOT ESTAB.	6 mg/m3	NOT ESTAB.
	IPEL-TWA: 5 mg/m3		IPEL-STEL: NOT ESTAB.	
02	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	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	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
07	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 severe eye irritation.
- ▶ **SKIN CONTACT:** May cause skin burns. May be harmful if 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. Vapor generated at elevated temperatures irritates eyes, nose and throat.
- ▶ **CHRONIC OVEREXPOSURE:** Avoid long-term and repeated contact. This product contains n-vinyl pyrrolidone, which has been shown to cause cancer in laboratory animals when administered by inhalation. There is no evidence of these effects in humans. This product contains tripropylene glycol diacrylate (TPGDA) which has shown evidence of mutagenicity and tumorigenicity in animal studies. The evidence is, however, inconclusive. In mice, 80-week skin painting study produced no evidence of skin or visceral organ tumors while a 20-week study resulted in benign skin tumors at the application site.

**SIGNS AND SYMPTOMS OF OVEREXPOSURE:** Redness, itching, burning sensation and visual disturbances may indicate excessive eye



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contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

**ALLERGENIC CONDITIONS AGGRAVATED BY EXPOSURE:** Not applicable.

#### 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 and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes. In case of accidental skin or eye contact, avoid concurrent exposure to the sun or other source of ultraviolet light. The presence of ultraviolet light may enhance the sensitivity of skin or eyes.
- ▶ **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.
- ▶ **INHALATION:** If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.
- ▶ **OTHER:** In case of accidental skin or eye contact, avoid concurrent exposure to the sun or other source of ultraviolet light. The presence of ultraviolet light may enhance the sensitivity of skin or eyes. 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:** 170 Degrees F ( 76 Degrees C) (PENSKEY-MARTENS CLOSED CUP)
- ▶ **FLAMMABLE LIMITS:** Lower explosion limit (LEL): Not available
- ▶ **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 IIIA 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 duct 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 90 degrees F.(32 degress C.). Store large quantities in buildings designed and protected for storage of NFPA Class IIIA combustible liquids.
- ▶ **OTHER PRECAUTIONS:** 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: neoprene rubber or polyethylene. 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.



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► **RESPIRATORY PROTECTION:** Where vapors are present, an appropriate NIOSH-approved air purifying respirator with organic vapor cartridges or positive-pressure, air-supplied respirator is required. 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.

**SAFETY 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]

BOILING RANGE: Not applicable  
VAPOR PRESSURE: N.A. mmHg  
VAPOR DENSITY: Heavier than air  
% VOLATILE/VOLUME: .010  
SPECIFIC GRAVITY: 1.076

SOLUBILITY IN WATER: 7.5 %  
WEIGHT/GALLON (LBS): 8.97 (U.S.)  
pH: Not applicable  
% SOLIDS BY WEIGHT: 100.00  
EVAPORATION RATE(BuOAc= 100): 0

ODOR/APPEARANCE: Viscous liquid with a distinctive odor that is characteristic of UV/EB curable materials.

**SECTION 10. STABILITY AND REACTIVITY**

► Exposure to high temperatures, strong UV light sources, free radical initiators, peroxides, strong alkalis or reactive metals could cause this material to polymerize exothermically.

► May undergo hazardous polymerization.

► **INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):** Reacts strongly with water generating large amounts of heat. 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: silicon oxides ; 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	3*	HEALTH	3
FLAMMABILITY	2	FLAMMABILITY	2
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: R748Z74 (00079023.010R748Z74 > )

