

MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: DXR83

PRODUCT TRADE NAME: HARDENER

REVISION DATE: 01/05/99 (000) 0808

CUSTOMER PART #/NAME: Not applicable

CHEMICAL FAMILY: POLYISOCYANATE

EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.) 91-800-00-214 (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: 08/29/00

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 severe eye irritation. 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*
01	METHYL (N-AMYL) KETONE	10- <20	110-43-0	
02	HEXANE-1,6-DI-ISOCYANATE POLYMER	80- <90	28182-81-2	
03	HEXAMETHYLENE-DI-ISOCYANATE	0.1- <1	822-06-0	

* 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	Y	N	Y	N N
02	NOT ESTAB	NOT ESTAB	N	Y	Y	N	N N
03	100	NOT ESTAB	Y	Y	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:
ACGIH U.S. OSHA

REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	50 ppm	NOT ESTAB.	100 ppm	NOT ESTAB.
02	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
02	IPEL-TWA: 0.5 mg/m3		IPEL-STEL: 1 mg/m3	
03	0.005 ppm	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 moderate skin irritation. 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 in the nose, throat and lungs. Prolonged inhalation may cause lung damage and/or allergic respiratory reaction. Allergic respiratory reactions to isocyanates 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. Chronic overexposure to isocyanates has been reported to cause lung damage, including a decrease in lung function, which may be permanent.

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.

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: 113 Degrees F (45 Degrees C) (PENSKY-MARTENS CLOSED CUP)

FLAMMABLE LIMITS: Lower explosion limit (LEL): 1.1

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.

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.). 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.

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: 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: 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]

BOILING RANGE: 300- 304Degrees F

SOLUBILITY IN WATER: .1 %

VAPOR PRESSURE: 2.1 mmHg

WEIGHT/GALLON (LBS): 8.91 (U.S.)

VAPOR DENSITY: Heavier than air

pH: Not determined

% VOLATILE/VOLUME: 21.760

% SOLIDS BY WEIGHT: 83.40

SPECIFIC GRAVITY: 1.069

EVAPORATION RATE(BuOAc=100): 40

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 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.

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	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: DXR83 (00179767.002DXR83)

Manufactured and Supplied by:

REFINISH PRODUCTS

19699 PROGRESS DRIVE

STRONGSVILLE, OH 44136

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