

MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: DCX61

PRODUCT TRADE NAME: HIGH SOLIDS HARDENER

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

CUSTOMER PART #/NAME: Not applicable

CHEMICAL FAMILY: POLYISOCYANATE

WHMIS HAZARD CLASS:

Class B, Division 3 Class D, Division 2, Subdivision A Class D, Division 1 Subdivision B

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

TECHNICAL INFORMATION: (440) 572-2800

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

DATE OF MSDS PREPARATION: 10/23/00

PRIMARY HAZARD WARNING

Combustible. Keep away from heat, sparks, flames, and other sources of fire. Do not smoke. Harmful if swallowed. May cause moderate skin irritation and severe eye irritation. Prolonged or repeated contact may cause an allergic reaction. Vapor and/or spray mist 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 CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM.

SECTION 2 - HAZARDOUS INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	C
01	METHYL (N-AMYL) KETONE	10 - 30	110-43-0	
02	HEXANE-1,6-DI-ISOCYANATE POLYMER	40 - 70	28182-81-2	
03	ISOPHORONE DIISOCYANATE	0.1-1.0	4098-71-9	

04	ISOPHORONE DIISOCYANATE POLYMER	15 - 40	53880-05-0
05	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 M
ACGIH ONTARIO

REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	50 ppm	NOT ESTAB.	25 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.	C- 0.02 ppm	NOT ESTAB.
04	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
04	IPEL-TWA: 0.5 mg/m3		IPEL-STEL: 1 mg/m3	
05	0.005 ppm	NOT ESTAB.	C- 0.02 ppm	NOT ESTAB.

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [
= 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	1.67 g/kg	12.60 g/kg	Not available
02	Not available	Not available	Not available
03	Not available	1.10 g/kg	Not available
04	Not available	Not available	Not available
05	.71 g/kg	.57 g/kg	.15 mg/L. 4 h

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

REF ACUTE TOXICITY

01	NO SEVERE HAZARDS
02	SKIN SENSITIZER/EYE IRRITANT
03	SKIN SENSITIZER/EYE IRRITANT
04	SKIN SENSITIZER
05	Toxic via dermal exposure./Toxic via inhalation./SKIN SENSITIZE

REF CHRONIC TOXICITY

01	NO LONG-TERM EFFECTS IDENTIFIED
02	RESPIRATORY SENSITIZER
03	RESPIRATORY SENSITIZER
04	RESPIRATORY SENSITIZER
05	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. Prolonged or repeated may cause an allergic skin reaction.

INHALATION: Vapor and/or spray mist harmful if inhaled. May cause irritant and/or allergic respiratory reaction in lungs. Vapor irritates eyes, nose and throat. Repeated exposure to high vapor concentrations may cause irritant the respiratory system and permanent brain and nervous system damage. If you have chronic (long-term) lung or breathing problems, or if you had a reaction to isocyanates.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. Prolonged use of an ingredient(s) in this product may cause lung sensitivity leading to pneumonitis. This product contains isocyanates. Inhalation may cause a sensation in the nose, throat and lungs. Prolonged inhalation may cause 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 exposure or a single massive exposure and may be delayed. Chronic overexposure to isocyanates has been reported to cause lung damage, including a decline 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 and 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 of mouth and 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 during or following the use of this product, contact a poison control emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE OR EXPLOSION DATA

FLASHPOINT: 122 Degrees F (50 Degrees C) (PENSKEY-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 II extinguishers (carbon dioxide, dry chemical, or universal aqueous film foam) designed to extinguish NFPA Class II combustible liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and cause a 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 may be used to cool closed containers to prevent pressure build-up and 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. Clean up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spill 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.

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 C.). Store large quantities in buildings designed and protected for st NFPA Class II combustible liquids.

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material i a multiple component system, read the Material Safety Data Sheet(s) fo other component or components before blending as the resulting mixture the hazards of all of its parts. Containers should be grounded when po 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 possibility exists for eye contact due to splashing or spraying liquid particles, or vapors.

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

RESPIRATORY PROTECTION: Where vapors or overspray are present, use a N approved, positive-pressure, air- supplied respirator for the entire t spraying and until all vapors and mists are gone. Follow the respirato manufacturer's directions for respirator use.

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

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

SECTION 7 - 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): 10.7 (IMPERIAL)

VAPOR DENSITY: Heavier than air

pH: Not determined

% VOLATILE/VOLUME: 21.190

% SOLIDS BY WEIGHT: 83.91

SPECIFIC GRAVITY: 1.074

EVAPORATION RATE(BuOAc=100): 40

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 sol listed in Section 2.

SECTION 8 - STABILITY AND REACTIVITY DATA

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

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

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; dioxide ; hydrogen cyanide ; lower molecular weight polymer fractions; 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
NUMBER: (412)492-5555 DATE OF MSDS PREPARATION: 10/23/00

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

HMIS Rating

NFPA Rating

HEALTH 3*
FLAMMABILITY 2
REACTIVITY 1

HEALTH 3
FLAMMABILITY 2
INSTABILITY 1

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

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

THIS IS THE END OF THE MSDS FOR: DCX61 (00149646.002DCX61

Manufactured and Supplied by:

REFINISH PRODUCTS

19699 PROGRESS DRIVE

STRONGSVILLE, OH 44136

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