

# MATERIAL SAFETY DATA SHEET



## SECTION 1 - PRODUCT AND COMPANY INFORMATION

Refinish Products  
19699 Progress Drive  
Strongsville, OH 44149

**EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)**  
(24 hours/day):

(514) 645-1320 (Canada)  
01-800-00-21-400 (Mexico)  
0532-83889090 (China)

**TECHNICAL INFORMATION:** (740) 363-9610 (DELAWARE, OH) 8:00 a.m. - 5:00 p.m. EST  
**PRODUCT SAFETY/MSDS INFORMATION:** (412) 492-5555 7:00 a.m. - 4:30 p.m. EST  
**Product ID:** DCX61 (0808)  
**PRODUCT NAME:** HIGH SOLIDS HARDENER  
**SYNONYMS:** None  
**ISSUE DATE:** 05/07/2008  
**EDITION NO.:** 7  
**CHEMICAL FAMILY:** ISOCYANATE

### EMERGENCY OVERVIEW:

Combustible. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. CAUSES SEVERE EYE IRRITATION. MAY CAUSE MODERATE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY CAUSE AN ALLERGIC SKIN REACTION. VAPOR AND/OR SPRAY MIST HARMFUL IF INHALED. SKIN CONTACT TO ISOCYANATE MONOMER MAY LEAD TO ALLERGIC LUNG REACTION. VAPOR IRRITATES EYES, NOSE, AND THROAT. MAY CAUSE IRRITATION AND/OR ALLERGIC RESPIRATORY REACTION IN LUNGS. HARMFUL IF SWALLOWED. STABLE - HAZARDOUS REACTIONS POSSIBLE AT EXTREMELY HIGH TEMPERATURES/PRESSURES.

## SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
HEXANE-1,6-DI-ISOCYANATE POLYMER 28182-81-2	40 - 70	X	
ISOPHORONE DIISOCYANATE POLYMER 53880-05-0	15 - 40	X	
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	X	
ISOPHORONE DIISOCYANATE 4098-71-9	0.1-1.0	X	
HEXAMETHYLENE-DI-ISOCYANATE 822-06-0	0.1-1.0	X	
(As Diisocyanates) 822-06-0	*	X	See Sections 8 and 15 for information.
(As Diisocyanates) 4098-71-9	*	X	See Sections 8 and 15 for information.

## SECTION 3 - HAZARDS IDENTIFICATION

### ACUTE OVEREXPOSURE EFFECTS

#### EYE CONTACT:

Causes severe eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

#### SKIN CONTACT:

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

#### SKIN ABSORPTION:

Skin absorption not expected to occur. Prolonged or repeated contact may cause an allergic skin reaction.

#### INHALATION:

Vapor and/or spray mist harmful if inhaled. Animal tests indicate that skin contact alone to monomeric isocyanates may lead to allergic respiratory reaction. Vapor irritates eyes, nose, and throat. May cause irritation and/or allergic respiratory reaction in lungs.

#### INGESTION:

Harmful if swallowed.

#### SIGNS & SYMPTOMS OF OVEREXPOSURE:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. 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. 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.

#### CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact.

Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Prolonged inhalation of an ingredient(s) in this product may cause lung sensitivity leading to pneumonitis. This product contains isocyanates. Inhalation may cause a burning sensation of the nose, throat and lungs. Allergic respiratory reactions to these materials are characterized by asthma-like symptoms such as chest tightness, wheezing, shortness of breath and coughing. These symptoms may follow repeated exposure or a single massive exposure and may be delayed.

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

## SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

#### EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

#### SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

#### INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

#### INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.

### SECTION 5 - FIRE FIGHTING MEASURES

#### FLAMMABLE PROPERTIES

**FLASHPOINT:** 122 Degrees F ( 50 Degrees C)

#### FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

**UEL:** Not Available.

**LEL:** 1.1

#### AUTOIGNITION TEMPERATURE:

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. 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.

#### PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

#### 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. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

### SECTION 6 - ACCIDENTAL RELEASE MEASURE

#### STEPS TO BE TAKEN IF 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.

### SECTION 7 - HANDLING AND STORAGE

#### PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

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.

#### STORAGE:

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.

### SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

#### ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

#### PERSONAL PROTECTIVE EQUIPMENT

#### EYES:

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

#### SKIN/GLOVES:

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. The decision whether to clean or discard contaminated clothing should be based on the chemicals contaminating them. Some chemicals can cause skin irritation, sensitization or other health effects if the cleaning process does not remove all traces of them. Consult a safety professional to determine whether clothing contaminated with this product can be safely cleaned and reused.

#### RESPIRATOR:

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. 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.

#### GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	50 ppm	Not established	100 ppm	Not established
ISOPHORONE DIISOCYANATE 4098-71-9	0.1-1.0	0.005 PPM	Not established	S- 0.005 ppm	0.02 ppm
HEXAMETHYLENE- DI-ISOCYANATE 822-06-0	0.1-1.0	0.005 ppm	Not established	Not established	Not established

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
HEXANE-1,6-DI- ISOCYANATE POLYMER 28182-81-2	40 - 70	Not established	Not established	0.5 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>
ISOPHORONE DIISOCYANATE POLYMER 53880-05-0	15 - 40	Not established	Not established	0.46 MG/m <sup>3</sup>	Not established
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	25 ppm	Not established	Not established	Not established
ISOPHORONE DIISOCYANATE 4098-71-9	0.1-1.0	C- 0.02 ppm	Not established	Not established	Not established
HEXAMETHYLENE- DI-ISOCYANATE 822-06-0	0.1-1.0	C- 0.02 PPM	Not established	Not established	Not established

**Key:** ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust]  
**Additional Information** Not applicable.

**SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES**  
(FORMULA VALUES, NOT SALES SPECIFICATIONS)

**SPECIFIC GRAVITY:** 1.088  
**PHYSICAL STATE:** Liquid  
**Percent Solids:** 83.91  
**Percent Volatile by Volume:** 20.380  
**pH:** Not available.  
**ODOR THRESHOLD:** Not available.  
**Vapour Pressure:** 2.1 mmHg  
**ODOR/APPEARANCE:** Viscous liquid with an odor characteristic of the solvents listed in Section 2.  
**VAPOR DENSITY:** HEAVIER THAN AIR  
**Evaporation Rate:** 40  
**BOILING POINT OR RANGE:** 300 - 304Degrees F  
**Freezing Point or Range:** Not Applicable.  
**Melting Point or Range(°C):** Not Applicable.  
**Partition coefficient (n-octanol/water):** Not Applicable.  
**WEIGHT PER GALLON:** 9.07 (U.S.) / 10.8 (IMPERIAL)

**SECTION 10 - STABILITY AND REACTIVITY**

**STABILITY:**

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

**CONDITIONS TO AVOID:**

None Known.

**INCOMPATIBLE MATERIALS:**

Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents. Avoid water and alcohols.

**HAZARDOUS POLYMERIZATION:**

None Known.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

- Carbon monoxide - Carbon dioxide - Traces of isocyanate - Oxides of nitrogen - Hydrogen cyanide - Lower molecular weight polymer fractions

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**ACUTE TOXICITY**

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	1.60 g/kg	10.21 g/kg	Not Available
ISOPHORONE DIISOCYANATE 4098-71-9	0.1-1.0	Not Available	1.10 g/kg	Not Available
HEXAMETHYLENE- DI-ISOCYANATE 822-06-0	0.1-1.0	.71 g/kg	.57 g/kg	.15 mg/l 4 hr

**CHRONIC TOXICITY**

**Ingredient Target Organ/Chronic Effects:**

- Brain - Central nervous system - Lung - Respiratory sensitizer

**Mutagenicity Toxicity:**

This has not been tested for this product.

**Reproductive Toxicity:**

This has not been tested for this product.

**SUPPLEMENTAL HEALTH INFORMATION:**

**SECTION 12 - ECOLOGICAL INFORMATION**

**POTENTIAL ENVIRONMENTAL EFFECTS**

**Ecotoxicity:** No Information Available.

**ENVIRONMENTAL FATE**

**Mobility:** No information available.

**Biodegradation:** No information available.

**Bioaccumulation:** No Information Available.

**PHYSICAL/CHEMICAL**

**Hydrolysis:** No information available.

**Photolysis:** No information available.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.

Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

**SECTION 14 - TRANSPORTATION INFORMATION**

**Proper Shipping Name:** Resin Solution

**NOS Technical Name:** None

**Hazard Class:** 3

**Subsidiary Class(es):** None

**UN Number:** UN1866

**Packing Group:** III

**USA - RQ Hazardous Substances:** Hexamethylene-Di-Isocyanate

**USA-RQ Hazardous Substance** Hexamethylene-Di-

**Threshold Ship Weight:** Isocyanate>41662.5 Pounds

**Marine Pollutant Name:** None

USA and Canada Shipments Only- Combustible Liquid Exception: Non-bulk (<=119 Gallons/450 L) ground shipments can be reclassified to "not regulated" for transportation. Bulk shipments - USA Only (> 119 Gallons/450 L) can be reclassified to a Combustible Liquid.

**USA Shipments Only - RQ Threshold Ship Weight:** This is the total weight of this product that must be shipped to exceed the RQ quantity.

**SECTION 15 - REGULATORY INFORMATION**

**INVENTORY STATUS**

**U.S. TSCA:** This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.

**FEDERAL REGULATIONS**

**US Regulations**

Refinish Products  
19699 Progress Drive  
Strongsville, OH 44149

Product ID: DCX61 (0808)  
PRODUCT NAME: HIGH SOLIDS HARDENER

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
HEXANE-1,6-DI- ISOCYANATE POLYMER 28182-81-2	40 - 70	Not Listed	Not Listed	Not Listed
ISOPHORONE DIISOCYANATE POLYMER 53880-05-0	15 - 40	Not Listed	Not Listed	Not Listed
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	Not Listed	Not Listed	Not Listed
ISOPHORONE DIISOCYANATE 4098-71-9	0.1-1.0	Not Listed	500 LBS	Not Listed
HEXAMETHYLENE- DI-ISOCYANATE 822-06-0	0.1-1.0	100 LBS	Not Listed	Not Listed
(As Diisocyanates) 822-06-0	*	Not Listed	Not Listed	Listed
(As Diisocyanates) 4098-71-9	*	Not Listed	Not Listed	Listed

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

DCX61 000005 (00442851.003)(09/17/07)  
050103, 000, 0808

\*\*\* END OF MSDS \*\*\*

**SARA 311/312**

Health (acute): Yes  
Health (chronic): Yes  
Fire (flammable): Yes  
Pressure: No  
Reactivity: No

**WHMIS HAZARD CLASS:** - Class B, Division 3 - Class D, Division 2,  
Subdivision A - Class D, Division 2, Subdivision B

**STATE/PROVINCIAL REGULATIONS**

**Additional Information**

**Key:** IARC- International Agency on the Research of Cancer; ACGIH-  
American Conference of Governmental Industrial Hygienists; NTP-  
National Toxicology Program \*Denotes chemical as NTP Known  
Carcinogen; + Denotes NTP Possible Carcinogen; OSHA-  
Occupational Safety and Health Administration.

**SECTION 16 - OTHER INFORMATION**

**Hazard Rating Systems**

**NFPA Rating:** 3 2 1

**HMIS Rating:** 3\*21

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

HMIS=Hazardous Materials Identification System; NFPA=National Fire  
Protection Association;

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

**PREPARED BY:** Product Safety Department

**REASON FOR REVISION:** Section 1 has been updated. Section 3 has  
been updated. Date. Edition.  
Updated MSDS  
format.

This Material Safety Data Sheet has been prepared in accordance with  
Canada's Workplace Hazardous Materials Information System (WHMIS)  
and 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.