



MATERIAL SAFETY DATA SHEET



SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: PC-12/PC-12C

April 14, 2010

Vishay Measurements Group, Inc.
Post Office Box 27777
Raleigh, NC 27611

919-365-3800

CHEMTREC 1-800-424-9300 (U.S.)
703-527-3887 (Outside U.S.)

NOTE: CHEMTREC numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

SECTION 2: HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

CAS NUMBER	CHEMICAL IDENTITY	%
67700-43-0	Reaction Product of Castor Oil with Toluene Diisocyanate	100

NOTE: The toluene diisocyanate (TDI) contained in this product is as follows:

26471-62-5	Mixture of Toluene 2,4-Diisocyanate and Toluene 2,6-Diisocyanate	9.0
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SECTION 3: HEALTH HAZARD DATA

Routes of Entry:

Inhalation: Yes Skin: Yes Ingestion: yes

Health Hazards (Acute and Chronic): Repeated inhalation of minimal amounts of vapor can cause respiratory sensitization and asthma.

Carcinogenicity:
NTP: See Note
IARC Monographs: See Note
OSHA Regulated: NA

NOTE: International Agency for Research on Cancer (IARC) has classified Toluene Diisocyanate (TDI) as a possible human carcinogen (IARC GROUP 2B) based on limited evidence of carcinogenicity in humans and less than sufficient evidence of carcinogenicity in experimental animals. It is also listed by National Toxicology Program (NTP) as reasonably anticipated to be a human carcinogen (RAHC).

Signs and Symptoms of Exposure:

INHALATION: May be harmful or fatal if inhaled. Exposure to vapor can cause irritation to lungs and mucous membranes. Repeated inhalation of minimal amounts of vapor can cause respiratory sensitization and asthma.

EYE CONTACT: Contact with eyes may cause irritation. Exposure to vapor can cause irritation to the eyes.

SKIN CONTACT: Contact with skin may cause irritation. Repeated minimal contact with skin may cause sensitization.

INGESTION: None listed.

Conditions Generally Aggravated by Exposure: None listed.

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES
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INHALATION: Remove to fresh air. If breathing is difficult, administer oxygen. Obtain immediate medical attention.

EYE CONTACT: Immediately flush eyes with a steady stream of water for at least 15 minutes, while lifting the upper and lower lids frequently. Get medical attention if irritation persists.

SKIN CONTACT: Wipe off excess material. Wash skin with alcohol, followed by soap and water. Discard shoes if contaminated. Wash clothing before reuse. Obtain medical assistance.

INGESTION: Get immediate medical attention. Drink promptly a large quantity of milk, egg white or gelatin solution. If not available, drink a large quantity of water.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA
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Flash Point (Method Used): >200°F (93°C) Setaflash closed cup.

Flammable limits: LEL: Not Available UEL: Not Available

Extinguishing Media: Water spray, dry chemical.

Special Firefighting Procedures: Firefighters must be equipped to prevent breathing of vapors or product of combustion. Wear an approved self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion Hazards: Contamination of isocyanates with water could lead to dangerous pressure inside closed containers by generation of carbon dioxide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Evacuate all personnel from danger area. Wear suitable protective equipment. Absorb on inert material such as sand, earth, vermiculite. Sweep up and collect in suitable container for disposal. Ventilate the area. Stop the leak if it can be done without risk. Supplies of suitable decontamination/commercial decontaminant should always be kept available. Leave to react for at least 30 minutes. Shovel residue into open-top drums and remove for further decontamination if necessary. Clean up area with water and additional decontaminant/commercial decontaminant. Test atmosphere for vapors to ensure safe working conditions before other personnel are allowed in the area. Suitable decontaminant solution: Commercial solution or water 90-95%, concentrated ammonia solution 5-10%, liquid detergent 0.2-2%.

SECTION 7: EXPOSURE CONTROLS -- PERSONAL PROTECTION

Respiratory Protection: If personnel exposure exceeds the exposure limits, select appropriate protective equipment in accordance with NIOSH recommendations. In the absence of engineering controls sufficient to maintain airborne concentrations below recommended occupational exposure limit values a positive pressure air-supplied respirator or self-contained breathing apparatus (SCBA) is recommended. Due to poor warning properties regarding the chemical of concern, negative pressure air-purifying respirators are not recommended at exposure level in excess of the exposure limit values.

Ventilation: Local exhaust ventilation is strongly recommended.

Protective Gloves: Chemical resistant gloves.

Eye Protection: Safety glasses with side shields. Wear chemical splash goggles and face shield in case of splashing.

Other Protective Clothing or Equipment: To prevent skin contact, wear protective clothing and appropriate impervious gloves.

Work / Hygienic Practices: Wash thoroughly after handling, especially before eating, drinking, smoking, or using restroom facilities. Contaminated clothing and shoes should be thoroughly cleaned and dried before reuse.

SECTION 8: HANDLING AND STORAGE

Precautions to be taken in handling and storing: Keep container tightly closed when not in use. Store in a cool, dry and well ventilated area. Store away from sources of direct heat and moisture. Seal containers with a dry nitrogen blanket and keep closed when not in use. Moisture contamination will evolve carbon dioxide and create pressure in closed systems.

Other Precautions: The container may be hazardous when empty, because it can retain product residues. Therefore, do not reuse container for food, clothing, or products for human or animal consumption or where skin contact may occur.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
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Boiling Point:	Not available
Vapor Pressure (mmHg):	Not determined
Vapor Density (Air = 1):	Not determined
Specific Gravity (H₂O = 1):	1.073
Melting Point:	Not available
Evaporation Rate (BuAc = 1):	Low
Volatile Organic Compounds:	9.0%
Solubility in Water:	Reacts in water, soluble in tetrahydrofuran, dimethylformamide, or methylene chloride.

Appearance and Odor: Pale yellow liquid, pungent odor.

SECTION 10: STABILITY AND REACTIVITY DATA
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Stability: Stable under recommended storage conditions.

Conditions to Avoid: None known.

Incompatibility (Materials to Avoid): Avoid contamination with water, strong oxidizers or alcohol.

Hazardous Decomposition or By-products: High temperatures will release amines, hydrocarbons and isocyanate containing compounds. Oxides of carbon, nitrogen and small amounts of hydrogen cyanide may be released under burning conditions.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION
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Toluene Diisocyanate

OSHA PEL:	0.14 mg/m ³
ACGIH STEL:	0.14 mg/m ³
ACGIH TLV:	0.04 mg/m ³
OTHER:	INHALATION (RAT) 4273 mg/m ³

SECTION 12: DISPOSAL CONSIDERATIONS
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Waste Disposal Method: Dispose of in accordance with local, state, and federal environmental regulations.

SECTION 13: TRANSPORTATION INFORMATION

SHIPPING NAME	CLASS	PACKING GROUP	UN NUMBER
Poisonous Liquid, N.O.S. (Toluene Diisocyanate/Isocyanate)	6.1	III	2810

SECTION 14: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION:

This product contains a toxic chemical or chemicals (as listed below) subject to the reporting requirements of Section 313 Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.

CAS NUMBER	CHEMICAL NAME	% BY WEIGHT
26471-62-5	Mixture of Toluene 2, 4-diisocyanate and Toluene-2, 6-diisocyanate	9.0

TSCA NOTIFICATION:

All components of this product are listed in the Toxic Substance Control Act Chemical Substance Inventory (TSCA).

SECTION 15: OTHER INFORMATION

To the best of our knowledge, the information provided above meets the requirements of the United States Occupational Safety and Health Act and regulations established under 29 CFR 1910.1200 (g)(2)(c)(1)-(4) for a mixture of hazardous chemicals which has not been tested as a whole. The data provided on this Material Safety Data Sheet is from manufacturers of the original components. Micro-Measurements specifically disclaims any and all form of liability and/or responsibility for the application of this product.