



Material Safety Data Sheet

SECTION 1: PRODUCT INFORMATION

PRODUCT NAME: Pemco 5100
MANUFACTURER: Alpha Systems
5120 Beck Drive
Elkhart, IN 46516
CHEMICAL FAMILY: Isocyanic acid
CAS NO.: 61111-77-1

EMERGENCY TELEPHONE NO.: 800-424-9300
OTHER INFORMATION CALLS: 574-295-5206
DATE REVISED: 12-04-06

SECTION 2: HAZARDOUS INGREDIENTS/ IDENTITY

Hazardous Component(s) (Chemical & Common Name(s))	OSHA PEL	ACGIH TLV	Other Exposure Limits	%	CAS NO.
4,4'-Diphenylmethane Diisocyanate(MDI)	0.02ppm	0.005ppm		5-20%	101-68-8
Higher Oligomers of MDI	Not Est.	Not Est.		5-20%	9016-87-9
Diphenylmethane Diisocyanate(MDI)	Not Est.	Not Est.		5-20%	26447-40-5

SECTION 3: PHYSICAL & CHEMICAL CHARACTERISTICS

BOILING POINT: 406 F @ 5 mmHg for MDI
WEIGHT: 9.4 lbs/gal
VAPOR DENSITY(AIR=1): 8.5 (MDI)
SOLUBILITY IN WATER: Not soluble

REACTIVITY IN WATER: Reacts with water
MELTING POINT: N/A
APPEARANCE AND ODOR: Light brown; slightly musty odor.

HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 1 PERSONAL PROTECTION: B

SECTION 4: FIRE & EXPLOSION DATA

FLASH POINT: 390 F (PMCC;ASTM D-93)
EXTINGUISHING MEDIA: Foam, carbon dioxide, dry chemical, water spray for large areas.
SPECIAL FIRE FIGHTING PROCEDURES: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. At temperatures greater than 400 F, polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore, use cold water to cool fire-exposed containers.

SECTION 5: PHYSICAL HAZARDS (REACTIVITY DATA)

STABILITY: Stable
INCOMPATIBILITIES: Water, amines, strong bases, alcohols. Will cause some corrosion to copper alloys and aluminum

DECOMPOSITION PRODUCTS: By high heat and fire: carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors or aerosols.
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SECTION 6: HEALTH HAZARDS

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:

NATIONAL TOXICOLOGY PROGRAM: No

I.A.R.C. MONOGRAPHS: No

OSHA: Not regulated

ROUTES OF ENTRY:

Skin contact from liquid and aerosols (spray application). Inhalation. Although MDI is low in volatility, an inhalation hazard can exist from MDI aerosols or vapors formed during heating, foaming or spraying.

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE INHALATION: MDI vapors or mist at concentrations above the TLV can irritate the mucous membranes in the respiratory

tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function.

CHRONIC INHALATION: As a result of previous repeated overexposures or a single large dose, certain individuals develop

isocyanate sensitization which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed.

ACUTE SKIN CONTACT: Irritation includes the symptoms of reddening, swelling, rash, scaling or blistering.

CHRONIC SKIN CONTACT: Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and in some cases, skin sensitization. Individuals who have skin sensitization can develop these symptoms from contact with liquid or vapors.

ACUTE EYE CONTACT: Liquids, aerosols or vapors are irritating and can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible.

CHRONIC EYE CONTACT: None found.

ACUTE INGESTION: Can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract.

Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

CHRONIC INGESTION: None found.

SECTION 7: EMERGENCY AND FIRST AID PROCEDURES

EYES: Flush with copious amount of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Refer individual to physician or ophthalmologist for immediate follow-up.

SKIN: Remove contaminated clothing. Wash affected skin thoroughly with soap and water. For severe exposures, get under safety shower after removing clothing, then get medical attention. For lesser exposures, seek medical attention if irritation develops or persists after the area is washed.

INHALATION: Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult physician should this occur.

INGESTION: DO NOT INDUCE VOMITING. Give 1 to 2 cups of milk or water to drink. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Consult physician

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SECTION 8: SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

EMERGENCY SPILL: CHEMTREC 800-424-9300

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILL:

SEE SECTION 9 FOR PROTECTION MEASURES TO TAKE BEFORE COMING INTO CONTACT WITH THIS PRODUCT.

Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment, including respiratory equipment during clean-up. If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed, but not sealed, container for disposal. Minor Spill: Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution: mixture of water (80%) with non-ionic surfactant (20%), or; water (90%) concentrated ammonia (3-8%) and detergent (2%). Add about 10 parts of neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let CO escape. Cured material is non-hazardous. Clean-up: Decontaminate floor with decontamination solution letting stand for at least 15 minutes.

WASTE DISPOSAL METHODS: Waste must be disposed of in accordance with federal, state, and local environmental control regulation. Incineration is the preferred method.

TOTE OR DRUM LEAK: TRANSFER CONTENTS TO A CLEAN, DRY, SEALED CONTAINER. AVOID CONTACT WITH WATER. IF MATERIAL IS RECOVERED WITHOUT CONTAMINATION, IT MAY BE USED. IF MATERIAL IS CONTAMINATED, DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL ENVIRONMENTAL CONTROL REGULATION. INCINERATION IS THE PREFERRED METHOD.

SECTION 9: SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

RESPIRATORY PROTECTION: Concentrations greater than the TLV can occur when MDI is sprayed, heated greater than 115°F or used in a poorly ventilated area. In such cases, or whenever concentrations of MDI exceed the TLV, respiratory protection must be worn. A positive pressure, supplied-air respirator or a self-contained breathing apparatus is recommended.

VENTILATION: Local exhaust should be used to maintain levels below the TLV whenever MDI is processed heated or spray applied.

EYE PROTECTION: Safety glasses with side shields.

SKIN PROTECTION: Permeation resistant gloves. Cover as much of the exposed skin area as possible with appropriate clothing.

ADDITIONAL PROTECTIVE MEASURE: As general industry practice, safety showers and eyewash stations should be available. Educate and train employees in safe use of product.

The information contained herein is based on current knowledge and experience, no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider this data only as a supplement to other information. Users should make independent determination of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment.

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