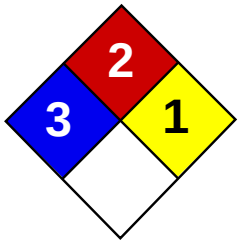

Health	3
Fire	2
Reactivity	1
Personal Protection	H

Material Safety Data Sheet
Phenyl Isocyanate MSDS

Section 1: Chemical Product and Company Identification

Product Name: Phenyl Isocyanate

Catalog Codes: SLP1324

CAS#: 103-71-9

RTECS: DA3675000

TSCA: TSCA 8(b) inventory: Phenyl Isocyanate

CI#: Not available.

Synonym: Carbanil; Isocyanic acid, phenyl ester; Phenyl carbonimide; Phenylcarbimide

Chemical Name: Isoyanatobenzene

Chemical Formula: C7H5NO

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Phenyl Isocyanate	103-71-9	100

Toxicological Data on Ingredients: Phenyl Isocyanate: ORAL (LD50): Acute: 196 mg/kg [Mouse]. 800 mg/kg [Rat]. DERMAL (LD50): Acute: 7130 mg/kg [Rabbit]. MIST (LC50): Acute: 22 mg/m 4 hours [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Extremely hazardous in case of inhalation. Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Slightly hazardous in case of skin contact (permeator). Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to lungs, skin. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: Not available.

Flash Points: OPEN CUP: 55.556°C (132°F).

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Never direct a water jet in the container in order to prevent any splashing of the product which could cause spreading of the fire. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Vapor may travel considerable distance to source of ignition and flash back.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Toxic flammable liquid, insoluble or very slightly soluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container.

Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Moisture sensitive.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
No exposure limits have been by ACGIH or OSHA for this compound. Based on exposure limits fo rother monoisocyanates, a TWA of 0.01 ppm is recommended.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Acrid

Taste: Not available.

Molecular Weight: 119.13 g/mole

Color: Colorless to light yellow. Clear

pH (1% soln/water): Not applicable.

Boiling Point: 158°C (316.4°F) - 168 C.

Melting Point: -30°C (-22°F)

Critical Temperature: Not available.

Specific Gravity: 1.096 (Water = 1)

Vapor Pressure: Not available.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Decomposes in water and alcohol.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatible materials, water/moisture.

Incompatibility with various substances:
Reactive with oxidizing agents, acids, alkalis. Slightly reactive to reactive with moisture.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with water, alcohols, strong bases, amines, acids, heat, and strong oxidizing agents. Has exploded when stirred wiht cobalt pentammine Triazoperchlorate + nitrosyl perchlorate. Some corrosion to copper alloys and aluminum.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 196 mg/kg [Mouse]. Acute dermal toxicity (LD50): 7130 mg/kg [Rabbit]. Acute toxicity of the MIST (LC50): 22 mg/m3 4 hours [Rat].

Chronic Effects on Humans:
MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. May cause damage to the following organs: lungs, skin.

Other Toxic Effects on Humans:
Extremely hazardous in case of inhalation. Hazardous in case of skin contact (irritant), of ingestion. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals:
Lethal Dose/Conc 50% Kil: LD50[Rat] - Route: Skin; Dose: 5 ml/kg

Special Remarks on Chronic Effects on Humans: May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation. Symptoms may include reddening, swelling, rash, scaling, and possible blistering. It can be absorbed through the skin. It can affect behavior/central nervous system if absorbed through the skin with symptoms similar to that of acute inhalation or ingestion. Eyes: Strong irritant. Contact liquid causes eye irritation and pain. Vapors may cause eye irritation. Lachyrmator. Degree of injury depends on the concentration and duration of contact. Inhalation: May be fatal if inhaled. Causes respiratory tract and mucous membrane irritation with coughing, wheezing, runny nose, sore throat, chest discomfort, shortness of breath and reduced lung function. May cause allergic respiratory reaction (asthma). May cause pulmonary edema, bronchitis. May cause cyanosis. May affect behavior/central nervous system (somnolence, tremor, aggression) Ingestion: May be harmful if swallowed. Causes mouth irritation, sore throat, gastrointestinal tract irritation with abdominal pain, nausea, vomiting, diarrhea. Chronic Potential Health Effects: Inhalation: Prolonged or repeated inhalation may cause allergic respiratory reaction(asthma), bronchiolar constriction, decreased lung function, lung damage. Symptoms can include chest tightness, coughing, wheezing, shortness of breath, asthma attack. It may also affect

the blood (red blood cells, red blood cell count). Skin: Prolonged or repeated skin contact may cause allergic dermatitis. Eyes: Prolonged or repeated contact may cause conjunctivitis or effects as seen in acute eye exposure.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification:
CLASS 3: Flammable liquid. CLASS 6.1: Poisonous material.

Identification: : Phenyl isocyanate UNNA: 2487 PG: I

Special Provisions for Transport: Poison inhalation hazard zone B

Section 15: Other Regulatory Information

Federal and State Regulations:
New Jersey: Phenyl Isocyanate TSCA 8(b) inventory: Phenyl Isocyanate TSCA 8(d) H and S data reporting: Phenyl Isocyanate: Effective date: 10/29/90; Sunset date: 6/30/98

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R10- Flammable. R22- Harmful if swallowed. R26- Very toxic by inhalation. R36/37/38- Irritating to eyes, respiratory system and skin. R42- May cause sensitization by inhalation. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of water. S36/37- Wear suitable protective clothing and gloves. S38- In case of insufficient ventilation, wear suitable respiratory equipment. S45- In case of accident or if you feel unwell,

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 2

Reactivity: 1

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 2

Reactivity: 1

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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