



chemists helping chemists in research & industry

**aldrich chemical co.**

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STEVE ANDERSON

DATE: 06/27/89  
CUST # 523216 P.O. # QC3804

M A T E R I A L   S A F E T Y   D A T A   S H E E T   P A G E :   1

IDENTIFICATION

PRODUCT # 18535-3      NAME: PHENYL ISOCYANATE, 98+%  
CAS # 103-71-9  
MF: C7H5NO

SYNONYMS

CARBANIL \* FENYLISOKYANAT (CZECH) \* ISOCYANIC ACID, PHENYL ESTER \*  
KARBANIL (CZECH) \* MONDUR P \* PHENYL CARBIMIDE \* PHENYL CARBONIMIDE \*  
PHENYL ISOCYANATE \* PHENYL ISOCYANATE (DOT) \* UN 2487 (DOT) \*

TOXICITY HAZARDS

RTECS # DA3675000

BENZENE, ISOCYANATO-

TOXICITY DATA

ORL-RAT LD50:940 MG/KG

MONS\*\*

SKN-RBT LD50:7130 MG/KG

TXAPA9 42,417,77

REVIEWS, STANDARDS, AND REGULATIONS

EPA TSCA CHEMICAL INVENTORY, 1986

EPA TSCA 8(A) PRELIMINARY ASSESSMENT INFORMATION, FINAL RULE FEREC  
47,26992,82

EPA TSCA SECTION 8(E) STATUS REPORT BEHQ-0678-0178

EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 1989

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS)  
DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

HEALTH HAZARD DATA

ACUTE EFFECTS

MAY BE FATAL IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN.

CAUSES BURNS.

MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES  
AND UPPER RESPIRATORY TRACT, EYES AND SKIN.

INHALATION MAY BE FATAL AS A RESULT OF SPASM, INFLAMMATION AND EDEMA  
OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.

SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,  
WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND  
VOMITING.

PROLONGED OR REPEATED EXPOSURE MAY CAUSE ALLERGIC REACTIONS IN CERTAIN  
SENSITIVE INDIVIDUALS.

REPEATED EXPOSURE MAY CAUSE ASTHMA.

FIRST AID

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS  
AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED  
CLOTHING AND SHOES.

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL  
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

CALL A PHYSICIAN.

WASH CONTAMINATED CLOTHING BEFORE REUSE.

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-----PHYSICAL DATA-----

MELTING POINT: -30 C  
BOILING POINT: 162 C TO 163 C  
SPECIFIC GRAVITY: 1.096  
VAPOR PRESSURE: 1.4 MM @ 20 C  
                  2.8 MM @ 55 C  
APPEARANCE: COLORLESS TO LIGHT-YELLOW

----- FIRE AND EXPLOSION HAZARD DATA -----

FLASH POINT: 132 F  
EXTINGUISHING MEDIA  
CARBON DIOXIDE,  
DRY CHEMICAL POWDER.  
SPECIAL FIRE FIGHTING PROCEDURES  
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO  
PREVENT CONTACT WITH SKIN AND EYES.  
UNUSUAL FIRE AND EXPLOSION HAZARDS  
COMBUSTIBLE.  
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

----- REACTIVITY DATA -----

INCOMPATIBILITIES

WATER  
ALCOHOLS  
STRONG BASES  
AMINES  
ACIDS  
STRONG OXIDIZING AGENTS  
HEAT  
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS  
THERMAL DECOMPOSITION MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE,  
AND NITROGEN OXIDES.  
HYDROGEN CYANIDE

----- SPILL OR LEAK PROCEDURES -----

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

EVACUATE AREA.  
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY  
RUBBER GLOVES.  
ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR  
DISPOSAL.  
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

WASTE DISPOSAL METHOD

THIS COMBUSTIBLE MATERIAL MAY BE BURNED IN A CHEMICAL INCINERATOR  
EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.

OBSERVE ALL FEDERAL, STATE & LOCAL LAWS.

---- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE ----

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT  
GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.  
USE ONLY IN A CHEMICAL FUME HOOD.  
SAFETY SHOWER AND EYE BATH.  
DO NOT BREATHE VAPOR.  
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.  
AVOID PROLONGED OR REPEATED EXPOSURE.  
WASH THOROUGHLY AFTER HANDLING.  
HIGHLY TOXIC.



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NAME: PHENYL ISOCYANATE, 98+%

CORROSIVE.  
LACHRYMATOR.  
POSSIBLE SENSITIZER.  
KEEP TIGHTLY CLOSED.  
MOISTURE-SENSITIVE.  
KEEP AWAY FROM HEAT AND OPEN FLAME.  
STORE IN A COOL DRY PLACE.

----- ADDITIONAL PRECAUTIONS AND COMMENTS -----

NOT APPLICABLE

----- REGULATORY INFORMATION -----

NOT APPLICABLE

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. ALDRICH SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.



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