

HBC CHEMICAL CORPORATION  
Material Safety Data Sheet

PARA DICHLORO BENZENE

1. PRODUCT & COMPANY IDENTIFICATION

SYNONYMS: 1,4-DICHLOROBENZENE, PARA-DICHLOROBENE, PDCB  
MOLECULAR WEIGHT: 147.01

MANUFACTURE: HBC Chemical Corporation  
2 South Middlesex Ave.  
Monroe Twp. NJ 08831

Tel: (609) 860-9990  
Fax: (609) 860-9991  
Emergency: 1-(800) 222-1212

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	PERCENT
P-DICHLOROBENE	100%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN  
AFFECTS THE RESPIRATORY SYSTEM, LIVER, KIDNEYS, EYES, SKIN AND BLOOD.  
CAUSES IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. COMBUSTIBLE.  
POSSIBLE CANCER HAZARD. MAY CAUSE CANCER BASED ON ANIMAL DATA.

RATINGS (PROVIDED HERE FOR YOUR CONVENIENCE)

HEALTH RATING: 3-SEVERE (CANCER CAUSING)

FLAMMABILITY RATING: 2-MODERATE

REACTIVITY RATING: 0-NONE

CONTACT RATING: 2-MODERATE

LAB PROTECTIVE EQUIP: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

EXTINGUISHER STORAGE

COLOR CODE: RED (FLAMMABLE)

POTENTIAL HEALTH EFFECTS: INHALATION OF DUST OR VAPORS CAN IRRITATE THE  
NOSE AND THROAT. MAY ALSO CAUSE HEADACHE, SWELLING AROUND THE EYES  
AND RUNNY NOSE. CAN CAUSE LOSS OF APPETITE, NAUSEA, VOMITING, CENTRAL  
NERVOUS SYSTEM EFFECTS, WIGHT LOSS AND LIVER AND KIDNEY DAMAGE.

INGESTION: TOXIC. SWALLOWING CAN PRODUCE ADVERSE HEALTH EFFECTS  
PARALLELING INHALATION.

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MSDS# 458 ITEM# 899360

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**SKIN CONTACT** : CAUSES SKIN IRRITATION, WITH A SLIGHT BURNING SENSATION. RED BLOTCHING OF THE SKIN DUE TO ALLERGIC REACTIONS MAY OCCUR. MAY BE ABSORBED THROUGH THE SKIN, SYMPTOMS MAY PARALLEL INHALATION.

**EYE CONTACT** : CAUSES IRRITATION, REDNESS, AND PAIN

**CHRONIC EXPOSURE** : CHRONIC EXPOSURE MAY DAMAGE BLOOD, LUNGS, CENTRAL NERVOUS SYSTEM, LIVER AND KIDNEYS. P-DICHLOROBENZENE IS A POSSIBLE CARCINOGEN.

**AGGRAVATION OF PRE-EXISTING CONDITIONS** : PERSONS WITH PRE-EXISTING SKIN DISORDERS OR EYE PROBLEMS, OR IMPAIRED LIVER, KIDNEY OR RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THE SUBSTANCE.

#### **4. FIRST AID MEASURES**

**INHALATION** : REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.

**INGESTION** : INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN.

**SKIN CONTACT** : WASH SKIN WITH SOAP OR MILD DETERGENT AND WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. CALL A PHYSICIAN.

**EYE CONTACT** : IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION IMMEDIATELY.

#### **5. FIRE FIGHTING MEASURES**

**FIRE** : FLASH POINT: 71C (151F) CC COMBUSTIBLE

**EXPLOSION** : ABOVE THE FLASH POINT, EXPLOSIVE VAPOR-AIR MIXTURES MAY BE FORMED. CONTACT WITH STRONG OXIDIZERS MAY CAUSE FIRE.

**FIRE EXTINGUISHING MEDIA** : WATER SPRAY, DRY CHEMICAL, ALCOHOL FOAM, OR CARBON DIOXIDE. WATER SPRAY MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS COOL. DILUTE SPILLS TO NONFLAMMABLE MIXTURES, PROTECT PERSONNEL ATTEMPTING TO STOP LEAK AND DISPERSE VAPORS.

**SPECIAL INFORMATION** : IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

#### **6. ACCIDENTAL RELEASE MEASURES**

REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA OF LEAK OR SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED IN SECTION 8. SPILLS: CLEAN UP SPILLS IN A MANNER THAT DOES NOT DISPERSE DUST INTO THE AIR. USE NON-SPARKING TOOLS AND EQUIPMENT. REDUCE AIRBORNE DUST AND PREVENT SCATTERING BY MOISTENING WITH WATER. PICK UP SPILL FOR RECOVERY OR DISPOSAL AND PLACE IN A CLOSED CONTAINER. US REGULATIONS (CERCLA) REQUIRE REPORTING SPILLS AND RELEASES TO SOIL, WATER AND AIR IN EXCESS OF REPORTABLE QUANTITIES. THE TOLL FREE NUMBER FOR THE US COAST GUARD NATIONAL RESPONSE CENTER IS (800) 424-8802.

## 7. HANDLING AND STORAGE

PROTECT AGAINST PHYSICAL DAMAGE. OUTSIDE OR DETACHED STORAGE IS PREFERRED. INSIDE STORAGE SHOULD BE IN A STANDARD FLAMMABLE LIQUIDS STORAGE ROOM OR CABINET. SEPARATE FROM OXIDIZING MATERIALS. STORAGE AND USE AREAS SHOULD BE NO SMOKING AREAS. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUES (DUST, SOLIDS), OBSERVE ALL WARNINGS AND PRECAUTIONS LISTED FOR THE PRODUCT.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### AIRBORNE EXPOSURE LIMITS:

-OSHA PERMISSIBLE EXPOSURE LIMIT (PEL):

75 PPM (TWA)

-ACGIH THRESHOLD LIMIT VALUE (TLV):

10 PPM (TWA), LISTED AS A3, ANIMAL CARCINOGEN.

VENTILATION SYSTEM: A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST VENTILATION IS GENERALLY PREFERRED BECAUSE IT CAN CONTROL THE EMISSIONS OF THE CONTAMINANT AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA. PLEASE REFER TO THE ACGIH DOCUMENT, *INDUSTRIAL VENTILATION, A MANUAL OF RECOMMENDED PRACTICES*, MOST RECENT EDITION, FOR DETAILS.

PERSONAL RESPIRATORS (NIOSH APPROVED): IF THE EXPOSURE LIMIT IS EXCEEDED, A FULL FACEPIECE RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE AND DUST/MIST FILTER MAY BE WORN UP TO 50 TIMES THE EXPOSURE LIMIT OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST FOR EMERGENCIES OR INSTANCES WHERE THE EXPOSURE LEVELS ARE NOT KNOWN, USE A FULL-FACEPIECE POSITIVE-PRESSURE, AIR-SUPPLIED RESPIRATOR. WARNING: AIR PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES.

SKIN PROTECTION: WEAR IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING BOOTS, GLOVES, LAB COAT, APRON OR COVERALLS, AS APPROPRIATE, TO PREVENT SKIN CONTACT.

EYE PROTECTION: USE CHEMICAL SAFETY GOGGLES AND/OR FULL FACE SHIELD WHERE DUSTING OR SPLASHING OF SOLUTIONS IS POSSIBLE. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	:	WHITE CRYSTALS / BALLS
ODOR	:	MOTH-BALL ODOR
SOLUBILITY	:	PRACTICALLY INSOLUBLE IN WATER
SPECIFIC GRAVITY	:	1.25 @ 20C/4C
PH	:	NO INFORMATION FOUND
% VOLATILES BY VOLUME @ 21C (70F)	:	100
BOILING POINT	:	174C (345F)
MELTING POINT	:	89C (127F)
VAPOR DENSITY (AIR=1)	:	5.08
VAPOR PRESSURE (MM HG)	:	10 @ 54.8C (131F)
EVAPORATION RATE (BUAC=1)	:	NOT APPLICABLE.

## 10. STABILITY AND REACTIVITY

**STABILITY:** STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE.

**HAZARDOUS DECOMPOSITION PRODUCTS:** MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, HYDROGEN CHLORIDE AND PHOSGENE WHEN HEATED TO DECOMPOSITION

**HAZARDOUS POLYMERIZATION:** WILL NOT OCCUR.

**INCOMPATIBILITIES:** OXIDIZING AGENTS, ALUMINUM AND ITS ALLOYS.

**CONDITIONS TO AVOID:** HEAT, FLAMES, IGNITION SOURCES AND INCOMPATIBLES.

## 11. TOXICOLOGICAL INFORMATION

ORAL RAT LD50: 500 MG/KG; SKIN RABBIT LD50: > 2 GM/KG; INVESTIGATED AS A TUMORIGEN, MUTAGEN, REPRODUCTIVE EFFECTOR.

-----\CANCER LISTS\-----			
INGREDIENT	---NTP CARCINOGEN---		
	KNOWN	ANTICIPATED	IARC CATEGORY
P-DICHLOROBENZENE	NO	YES	2B

## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL FATE:** WHEN RELEASED INTO THE SOIL, THIS MATERIAL MAY LEACH INTO GROUNDWATER. WHEN RELEASED INTO THE SOIL, THIS MATERIAL MAY EVAPORATE TO A MODERATE EXTENT. WHEN RELEASED INTO THE SOIL, THIS MATERIAL MAY BIODEGRADE TO A MODERATE EXTENT. WHEN RELEASED INTO WATER, THIS MATERIAL MAY EVAPORATE TO A MODERATE EXTENT. WHEN RELEASED INTO WATER, THIS MATERIAL MAY BIODEGRADE TO A MODERATE EXTENT. THIS MATERIAL HAS AN EXPERIMENTALLY-DETERMINED BIOCONCENTRATION FACTOR (BCF) OF GREATER THAN 100. THIS MATERIAL MAY BIOACCUMULATE TO SOME EXTENT. WHEN RELEASED INTO THE AIR, THIS MATERIAL MAY BE MODERATELY DEGRADED BY REACTION WITH PHOTOCHEMICALLY PRODUCED HYDROXYL RADICALS. WHEN RELEASED INTO THE AIR, THIS MATERIAL IS EXPECTED TO HAVE A HALF-LIFE OF GREATER THAN 30 DAYS. WHEN RELEASED INTO THE AIR, THIS MATERIAL MAY BE REMOVED FROM THE ATMOSPHERE TO A MODERATE EXTENT BY WET DEPOSITION.

**ENVIRONMENTAL TOXICITY:** THE LC50/96-HOUR VALUES FOR FISH ARE BETWEEN 1 AND 10 MG/L. THE LC50/96-HOUR VALUES FOR FISH ARE BETWEEN 10 AND 100 MG/L. THIS MATERIAL MAY BE TOXIC TO AQUATIC LIFE.

## 13. DISPOSAL CONSIDERATIONS

WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE HANDLED AS HAZARDOUS WASTE AND SENT TO A RCRA APPROVED INCINERATOR OR DISPOSED IN A RCRA APPROVED WASTE FACILITY. PROCESSING, USE OR CONTAMINATION OF THIS PRODUCT MAY CHANGE THE WASTE MANAGEMENT OPTIONS. STATE AND LOCAL DISPOSAL REGULATIONS MAY DIFFER FROM FEDERAL DISPOSAL REGULATIONS. DISPOSE OF CONTAINER AND UNUSED CONTENTS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS.

#### 14. TRANSPORT INFORMATION

##### DOMESTIC (LAND, D.O.T.)

PROPER SHIPPING NAME: P-DICHLOROBENZENE

HAZARD CLASS: N.A.

UN/NA: N.A.

PACKING GROUP: N.A.

#### 15. REGULATORY INFORMATION

-----\CHEMICAL INVENTORY STATUS - PART 1\-----  
INGREDIENT  
P-DICHLOROBENEZENE

TSCA	EC	JAPAN	AUSTRALIA
YES	YES	YES	YES

-----\CHEMICAL INVENTORY STATUS - PART 2\-----  
INGREDIENT  
P-DICHLOROBENZENE

--CANADA--			
KOREA	DSL	NDL	PHIL.
YES	YES	NO	YES

CHEMICAL WEAPONS CONVENTION: NO

TSCA 12(B): NO

CDTA: YES SARA 311/312:

ACUTE: YES

CHRONIC: YES FIRE: YES PRESSURE: NO

REACTIVITY: NO

PURE / SOLID)

AUSTRALIAN HAZCHEM CODE: NO INFORMATION FOUND.

POISON SCHEDULE: NO INFORMATION FOUND.

WHMIS: THIS MSDS HAS BEEN PREPARED ACCORDING TO THE HAZARD CRITERIA OF THE CONTROLLED PRODUCTS REGULATIONS (CPR) AND THE MSDS CONTAINS ALL OF THE INFORMATION REQUIRED BY THE CPR.

#### 16. OTHER INFORMATION

LABEL HAZARD WARNING: WARNING! HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS THE RESPIRATORY SYSTEM, LIVER, KIDNEYS, EYES, SKIN AND BLOOD. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. COMBUSTIBLE POSSIBLE CANCER HAZARD MAY CAUSE CANCER BASED ON ANIMAL DATA.

LABEL PRECAUTIONS: AVOID BREATHING DUST OR VAPORS. USE ONLY WITH ADEQUATE VENTILATION. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. KEEP CONTAINER CLOSED. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING. KEEP AWAY FROM HEAT AND FLAME.



CERTIFICATE OF ANALYSIS OF PARA DICHLORO BENZENE.

	<u>Specification</u>		<u>Observed Value</u>
Appearance	Colorless Molten Material Free from Turbidity and Suspended matter		Colorless Molten Material Free from Turbidity and Suspended Matter
PDCB	Min	99.7 %	99.8 %
Other Chlorobenzenes	Max	0.3%	0.2%
Rel Density at 20 C		1.458	1.458
Solidifying Point	Min	52.8°C	Min 52.8°C
Moisture	Max	0.03%	0.02%
Boiling Point		174°C	174°C
Flash Point		65.5°C	
Solubility	Insoluble in water & Soluble in alcohol, Benzene and ether		Insoluble in water & Soluble in alcohol, Benzene and ether