

## Burdick & Jackson

# Material Safety Data Sheet

## Chlorobenzene

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Chlorobenzene

**OTHER/GENERIC NAMES:** Benzene Chloride, Monochlorobenzene, Chlorobenzol

**PRODUCT USE:** Solvent

**MANUFACTURER:** Honeywell, Burdick & Jackson  
1953 South Harvey Street  
Muskegon, MI 49442

**FOR MORE INFORMATION CALL:**  
(Monday-Friday, 8:00am-5:00pm)  
1-800-368-0050

**IN CASE OF EMERGENCY CALL:**  
(24 Hours/Day, 7 Days/Week)  
1-800-707-4555 or Chemtrec 1-800-424-9300

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Chlorobenzene	108-90-7	100

Trace impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

### 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Clear, colorless flammable liquid and vapor. Odor is faint. Harmful if swallowed or inhaled.

#### POTENTIAL HEALTH HAZARDS

**SKIN:** Irritant. May cause dermatitis through defatting of the tissue.

**EYES:** Irritant. Burning and itching may be a result of contact.

**INHALATION:** Irritant. Can cause headache, nausea, and narcosis. Central nervous system depressant.

**INGESTION:** Can cause nausea, vomiting and diarrhea.

**DELAYED EFFECTS:** Exposure can cause lung, liver and kidney damage.

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Ingredients found on one of the OSHA designated carcinogen lists are listed below.

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
No ingredients listed in this section.			

**4. FIRST AID MEASURES**

**SKIN:** Rinse affected area thoroughly with water until no evidence of chemical remains.

**EYES:** Rinse eyes with plenty of water for at least 15 minutes. Contact a physician.

**INHALATION:** Remove from exposure area to fresh air. If victim is not breathing administer artificial respiration according to your level of training and obtain professional medical assistance immediately.

**INGESTION:** Get professional medical assistance immediately. Do NOT induce vomiting to a victim who is unconscious, not breathing, or convulsing. For other symptoms (such as nausea) consult local Poison Control Center.

**ADVICE TO PHYSICIAN:** No specific antidote. Treat symptomatically and supportively.

**5. FIRE FIGHTING MEASURES****FLAMMABLE PROPERTIES**(593°C)

<b>FLASH POINT:</b>	28°C (82°F)
<b>FLASH POINT METHOD:</b>	Closed cup
<b>AUTOIGNITION TEMPERATURE:</b>	593°C (1099°F)
<b>UPPER FLAME LIMIT (volume % in air):</b>	7.1%.
<b>LOWER FLAME LIMIT (volume % in air):</b>	1.3%.
<b>FLAME PROPAGATION RATE (solids):</b>	Not applicable
<b>OSHA FLAMMABILITY CLASS:</b>	IC

**EXTINGUISHING MEDIA:**

Carbon dioxide, dry chemical, regular foam or water spray.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Dangerous fire hazard and moderate explosion hazard when exposed to an ignition source. Thermal decomposition may include highly toxic fumes of phosgene, toxic and corrosive fumes of chlorides and oxides of carbon.

**SPECIAL FIREFIGHTING PRECAUTIONS/INSTRUCTIONS:**

Do not release runoff from fire control methods to sewers or waterways. Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive pressure mode.

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**6. ACCIDENTAL RELEASE MEASURES**

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**IN CASE OF SPILL OR OTHER RELEASE:** (Always wear recommended personal protective equipment.)

Eliminate sources of ignition. Provide adequate ventilation to spill area. Use inert absorbent material such as ground corn cobs to dike (prevent runoff) and soak up spilled material. Using spark proof tools scoop up absorbed material and place in an approved waste container. (See Section 13 of this document for proper disposal considerations.) Do not allow material to enter sewers or waterways.

**Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.**

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**7. HANDLING AND STORAGE**

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**NORMAL HANDLING:** (Always wear recommended personal protective equipment.)

Protective Neoprene or natural rubber gloves and apron are recommended. Goggles and/or face shield should be worn to guard against splashing. Keep away from heat and open flame. Avoid contact with skin, eyes and clothing. Contaminated clothing should be decontaminated using dedicated spill clean-up containers, plenty of water, and detergent prior to conventional laundering in home laundry facilities.

**STORAGE RECOMMENDATIONS:**

Store in an area designed for storage of flammable liquids. (OSHA 29 CFR 1910.106)

Store full or partially full containers in an upright position, tightly closed in a cool, dry, well ventilated facility designed for flammable liquids. Store away (segregate) from acids, oxidizers, and explosives. Handle containers in a safe manner using proper equipment and avoiding damage to the containers.

**Flammable liquid and vapor. Once liquid solvent has been completely dispensed, containers which appear "empty" should be handled in the same manner as when they were "full" of liquid solvent.**

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**ENGINEERING CONTROLS:**

Provide general or local exhaust ventilation systems to maintain airborne concentrations below exposure levels. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

**PERSONAL PROTECTIVE EQUIPMENT**

**SKIN PROTECTION:**

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Where liquid contact with exposed skin is possible, wear solvent resistant impervious personal protective equipment (gloves, face shields, etc.). Contaminated clothing and personal protective equipment should be laundered and cleaned separately at the work site.

**EYE PROTECTION:**

Wear safety glasses. Contact lenses should not be worn. Where splashing or dripping is likely to occur, use chemical resistant goggles and/or face shield.

**RESPIRATORY PROTECTION:**

Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**ADDITIONAL RECOMMENDATIONS:**

Provide for safety showers and eyewash stations .

**EXPOSURE GUIDELINES**

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
Chlorobenzene	10 ppm TWA	75 ppm TWA	

\* = Limit established by Honeywell International, Inc.

\*\* = Workplace Environmental Exposure Level (AIHA).

\*\*\* = Biological Exposure Index (ACGIH).

**OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:** None

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE:</b>	Clear, colorless
<b>PHYSICAL STATE:</b>	liquid
<b>MOLECULAR WEIGHT:</b>	112.56
<b>CHEMICAL FORMULA:</b>	C <sub>6</sub> H <sub>5</sub> Cl
<b>ODOR:</b>	mild almond-like      Odor Threshold: 60 ppm
<b>SPECIFIC GRAVITY (water =1):</b>	1.1058 @ 20°C
<b>SOLUBILITY IN WATER (weight %):</b>	0.05 %
<b>pH:</b>	Not applicable
<b>BOILING POINT:</b>	270°F (132°C)
<b>MELTING POINT:</b>	-51°F (-46°C)
<b>VAPOR PRESSURE:</b>	8.8 mm Hg at 20°C
<b>VAPOR DENSITY (air = 1.0):</b>	3.9
<b>EVAPORATION RATE:</b>	1 <b>COMPARED TO:</b> Ether = 1
<b>% VOLATILES:</b>	100 %
<b>FLASH POINT:</b>	28° C ( 82° F)

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(Flash point method and additional flammability data are found in Section 5.)

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**10. STABILITY AND REACTIVITY**

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**NORMALLY STABLE? (CONDITIONS TO AVOID):**

Chlorobenzene is stable at room temperature in closed containers under normal storage and handling conditions. Avoid heat, ignition sources, incompatible materials and contamination of water sources.

**INCOMPATIBILITIES:**

Strong oxidizers, dimethyl sulfoxide, silver perchlorate, sodium and plastics, rubber and coatings.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

Chlorobenzene may include highly toxic fumes of phosgene, toxic and corrosive fumes of chlorides and oxides of carbon.

**HAZARDOUS POLYMERIZATION:**

Hazardous polymerization cannot occur.

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**11. TOXICOLOGICAL INFORMATION**

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**IMMEDIATE (ACUTE) EFFECTS:**

Oral LD<sub>50</sub> (rat): 2290 mg/Kg

Skin LD (rabbit): 2200 mg/Kg

Skin Irritation (rabbit): Slight (single exposure)

Severe (continuous exposure for 1 week)

Eye Irritation (rabbit): mild transient effects

Inhalation (cats): 200-600 ppm, tolerated without significant effects

1200 ppm, narcotic effects

**DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:**

Oral (rats): Liver and kidney effects at 188 mg/Kg/d, 5d/wk for 192 days

Oral (dogs): Liver, kidney, gastroenteric mucosal and blood effects (death in 4/8 animals) at 272.5 mg/Kg/d, 5d/wk for 93 days

Inhalation (rats, rabbits & guinea pigs): 7 h/d, 5d/wk for 32 exposures

- no AEL, 200 ppm

- slight liver effects, 475 ppm

- lung, liver and kidney effects; death in guinea pigs, 1000 ppm

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**OTHER DATA:**

None

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**12. ECOLOGICAL INFORMATION**

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LC<sub>50</sub> (Fathead minnow) = 16.9 mg/L (96 hr)LC<sub>50</sub> (Rainbow trout) = 1.8 mg/L (24 hr)

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**13. DISPOSAL CONSIDERATIONS**

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**RCRA**

Is the unused product a RCRA hazardous waste if discarded? Yes

If yes, the RCRA ID number is: D001, D021, U037

**OTHER DISPOSAL CONSIDERATIONS:**

Dispose of material in accordance with all applicable local, state and federal regulations.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

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**14. TRANSPORT INFORMATION**

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US DOT PROPER SHIPPING NAME: Chlorobenzene  
US DOT HAZARD CLASS: 3, Flammable Liquid  
US DOT ID NUMBER: UN 1134  
US DOT PACKING GROUP: III  
NA EMERGENCY RESPONSE GUIDE: 130

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

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**15. REGULATORY INFORMATION**

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**TOXIC SUBSTANCES CONTROL ACT (TSCA)**

TSCA INVENTORY STATUS: Listed

OTHER TSCA ISSUES: None

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"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA/CERCLA RQ (lb)</u>	<u>SARA EHS TPO (lb)</u>
Chlorobenzene	100	not listed

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: Immediate. Fire.

**SARA 313 TOXIC CHEMICALS:**

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

<u>INGREDIENT NAME</u>	<u>COMMENT</u>
Chlorobenzene	

**STATE RIGHT-TO-KNOW**

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT %</u>	<u>COMMENT</u>
No ingredients listed in this section.		

**ADDITIONAL REGULATORY INFORMATION:**

None

**WHMIS CLASSIFICATION (CANADA):**

Class B, Division 2

**FOREIGN INVENTORY STATUS:**

On EINECS and Canadian DSL

**16. OTHER INFORMATION**

**CURRENT ISSUE DATE:** June, 2000

**PREVIOUS ISSUE DATE:** January, 1995, October, 1997

**CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:**

Conversion to ANSI Standard. New header and footer information.

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NFPA Classification	
Health:	2
Flammability:	3
Reactivity:	0