

Chlorobenzene**043-4**

Version 2.0

Revision Date 08/07/2018

Print Date 07/31/2019

SECTION 1. IDENTIFICATION

Product name : Chlorobenzene

Number : 000000011340

Product Use Description : Solvent

Manufacturer or supplier's details : Honeywell International Inc.
1953 South Harvey Street
Muskegon, MI 49442

For more information call : 1-800-368-0050
+1-231-726-3171

(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or**
: **+1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid

Color : colourless

Odor : sweet

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Classification of the substance or mixture

Classification of the substance or mixture : **Flammable liquids, Category 3**
Acute toxicity, Category 4, Inhalation
Skin irritation, Category 2

GHS Label elements, including precautionary statements

Symbol(s) :



Signal word :

Warning

Hazard statements :

Flammable liquid and vapour.
Causes skin irritation.
Harmful if inhaled.

Precautionary statements :

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.

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If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant
foam for extinction.

Storage:

Store in a well-ventilated place. Keep cool.

Disposal:

Dispose of contents/ container to an approved waste disposal
plant.

Carcinogenicity

ACGIH: Chlorobenzene 108-90-7
A3: Confirmed animal carcinogen

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₆H₅Cl
Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Chlorobenzene	108-90-7	100.00 %

SECTION 4. FIRST AID MEASURES

Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

Skin contact : Wash off immediately with plenty of water for at least 15

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- minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation develops or persists.
- Ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician.

Notes to physician

- Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Dry chemical
Foam
Carbon dioxide (CO₂)
Cool closed containers exposed to fire with water spray.
- Unsuitable extinguishing media : Water may be ineffective.
Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during firefighting : Flammable.
Vapours may form explosive mixtures with air.
Vapours are heavier than air and may spread along floors.
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.
In case of fire hazardous decomposition products may be produced such as:
Phosgene
Carbon oxides
Chloride fumes
- Special protective equipment : Wear self-contained breathing apparatus and protective suit.

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for firefighters

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Wear personal protective equipment.
Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Ensure adequate ventilation.
Remove all sources of ignition.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing. |
| Environmental precautions | : | Prevent further leakage or spillage if safe to do so.
Prevent product from entering drains.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Do not allow run-off from fire fighting to enter drains or water courses. |
| Methods and materials for containment and cleaning up | : | Ventilate the area.
No sparking tools should be used.
Use explosion-proof equipment.
Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). |

SECTION 7. HANDLING AND STORAGE**Handling**

- | | | |
|-------------------------------|---|--|
| Precautions for safe handling | : | Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
Do not smoke.
Do not swallow.
Avoid breathing vapours, mist or gas. |
|-------------------------------|---|--|

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Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion : Keep away from fire, sparks and heated surfaces.
Take precautionary measures against static discharges.
Ensure all equipment is electrically grounded before beginning transfer operations.
Use explosion-proof equipment.
Keep product and empty container away from heat and sources of ignition.
No sparking tools should be used.
No smoking.

Storage

Conditions for safe storage, including any incompatibilities : Store in area designed for storage of flammable liquids. Protect from physical damage.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from heat and sources of ignition.
Keep away from direct sunlight.
Store away from incompatible substances.
Container hazardous when empty.
Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.

Engineering measures : Use with local exhaust ventilation.
Prevent vapour buildup by providing adequate ventilation during and after use.

Eye protection : Do not wear contact lenses.
Wear as appropriate:
Safety glasses with side-shields

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- If splashes are likely to occur, wear:
Goggles or face shield, giving complete protection to eyes
- Hand protection : Solvent-resistant gloves
Gloves must be inspected prior to use.
Replace when worn.
- Skin and body protection : Wear as appropriate:
Solvent-resistant apron
Flame retardant antistatic protective clothing.
If splashes are likely to occur, wear:
Protective suit
- Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
Use NIOSH approved respiratory protection.
- Hygiene measures : When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
Keep working clothes separately.
Do not swallow.
Avoid breathing vapours, mist or gas.
Avoid contact with skin, eyes and clothing.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Chlorobenzene	108-90-7	TWA : Time weighted average	(10 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Chlorobenzene	108-90-7	PEL : Permissible exposure limit	350 mg/m3 (75 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

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Chlorobenzene	108-90-7	TWA : Time weighted average	350 mg/m3 (75 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Color	: colourless
Odor	: sweet
pH	: Note: no data available
Melting point/range	: -46 °C
Boiling point/boiling range	: 132 °C
Flash point	: 82 °F (28 °C) Method: closed cup
Lower explosion limit	: 1.3 %(V)
Upper explosion limit	: 7.1 %(V)
Vapor pressure	: 11.7 hPa at 20 °C(68 °F)
Vapor density	: 3.9
Density	: 1.1058 g/cm3 at 20 °C

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Water solubility : Note: negligible

Ignition temperature : 593 °C

Molecular weight : 112.56 g/mol

SECTION 10. STABILITY AND REACTIVITY

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Hazardous polymerisation does not occur.

Incompatible materials : Strong oxidizing agents
Silver perchlorate
Sodium
Dimethyl sulfoxide
Plastics
Rubber and coatingsHazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:
Phosgene
Carbon oxides
Chloride fumes**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity : LD50: 2,290 mg/kg

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Species: Rat

Acute inhalation toxicity : LC50: 13.9 mg/l , vapour
Exposure time: 6 h
Species: Rat

Acute dermal toxicity : LD50: > 7,940 mg/kg
Species: Rabbit

Skin irritation : Species: Rabbit
Result: Mild skin irritation
Note: (single exposure)

: Species: Rabbit
Result: Severe skin irritation
Note: (continuous exposure for one week)

Eye irritation : Species: Rabbit
Note: mild transient effects

Repeated dose toxicity : Species: Rat
Application Route: Oral
Note: Liver Kidney 5d/wk for 192 days

: Species: Dog
Application Route: Oral
Note: Liver Kidney Gastrointestinal tract Blood effects (death in 4/8 animals) at 272.5 mg/kg/d, 5d/wk for 93 days

: Species: Rat
Application Route: Inhalation
NOAEL (No observed adverse effect level): 200 ppm
Note: 7 h/d, 5 d/wk for 32 exposures slight liver effects, 475 ppm lung, liver and kidney effects; death in guinea pigs, 1000 ppm

: Species: Rabbit

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Application Route: Inhalation

NOAEL (No observed adverse effect level): 200 ppm

Note: 7 h/d, 5 d/wk for 32 exposures slight liver effects, 475 ppm lung, liver and kidney effects; death in guinea pigs, 1000 ppm

: Species: Guinea pig

Application Route: Inhalation

NOAEL (No observed adverse effect level): 200 ppm

Note: 7 h/d, 5 d/wk for 32 exposures slight liver effects, 475 ppm lung, liver and kidney effects; death in guinea pigs, 1000 ppm

Further information

: Note: Confirmed animal carcinogen with unknown relevance to humans.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish

: LC50: 16.9 mg/l

Exposure time: 96 h

Species: Pimephales promelas (fathead minnow)

: LC50: 10.4 mg/l

Exposure time: 96 h

Species: Oncorhynchus mykiss (rainbow trout)

Method: OECD Test Guideline 203

Biodegradability

Chlorobenzene

: Result: Not readily biodegradable.

Value: 15 %

Method: OECD 301 C

Further information on ecology

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT UN/ID No. : UN 1134
Proper shipping name : CHLOROBENZENE
Class : 3
Packing group : III
Hazard Labels : 3

IATA UN/ID No. : UN 1134
Description of the goods : CHLOROBENZENE
Class : 3
Packaging group : III
Hazard Labels : 3
Packing instruction (cargo aircraft) : 366
Packing instruction (passenger aircraft) : 355
Packing instruction (passenger aircraft) : Y344

IMDG UN/ID No. : UN 1134
Description of the goods : CHLOROBENZENE
Class : 3
Packaging group : III
Hazard Labels : 3
EmS Number : F-E, S-D
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

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Inventories

US. Toxic Substances
Control Act : On TSCA Inventory

Australia. Industrial
Chemical (Notification and
Assessment) Act : On the inventory, or in compliance with the inventory

Canada. Canadian
Environmental Protection
Act (CEPA). Domestic
Substances List (DSL) : All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals
Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines. The Toxic
Substances and Hazardous
and Nuclear Waste Control
Act : On the inventory, or in compliance with the inventory

China. Inventory of Existing
Chemical Substances : On the inventory, or in compliance with the inventory

New Zealand. Inventory of
Chemicals (NZIoC), as
published by ERMA New
Zealand : On the inventory, or in compliance with the inventory

National regulatory information

US. EPA Emergency
Planning and Community
Right-To-Know Act
(EPCRA) SARA Title III
Section 302 Extremely
Hazardous Substance (40
CFR 355, Appendix A) : The following component(s) of this product is/are subject to
release reporting under 40 CFR 302 when release exceeds the
Reportable Quantity (RQ):

Reportable quantity: 100 lbs

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	: Chlorobenzene	108-90-7
SARA 302 Components	: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.	
SARA 313 Components	: The following components are subject to reporting levels established by SARA Title III, Section 313:	
	: Chlorobenzene	108-90-7
SARA 311/312 Hazards	: Fire Hazard Acute Health Hazard Chronic Health Hazard	
CERCLA Reportable Quantity	: 100 lbs	
California Prop. 65	: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	
Massachusetts RTK	: Chlorobenzene	108-90-7
New Jersey RTK	: Chlorobenzene	108-90-7
Pennsylvania RTK	: Chlorobenzene	108-90-7

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 2*	3
Flammability	: 3	3
Physical Hazard	: 0	
Instability	:	0

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* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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