

## Chlorobenzene

101389-2.5L

Version 1.3

Revision Date 16.12.2022

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name : Chlorobenzene  
SDS-number : 000000020754  
Type of product : Substance  
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.  
Chemical name : chlorobenzene  
Index-No. : 602-033-00-1  
REACH Registration Number : no data available

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Laboratory chemicals  
Uses advised against : none

#### 1.3. Details of the supplier of the safety data sheet

Company	: Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
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Telephone :  
For further information, please contact: : [SafetyDataSheet@Honeywell.com](mailto:SafetyDataSheet@Honeywell.com)

#### 1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)  
+1-303-389-1414 (Medical)  
Country based Poison Control Center : see chapter 15.1

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### SECTION 2: Hazards identification


#### 2.1. Classification of the substance or mixture

##### REGULATION (EC) No 1272/2008

Flammable liquids Category 3  
H226 Flammable liquid and vapour.  
Acute toxicity Category 4 - Inhalation  
H332 Harmful if inhaled.  
Skin irritation Category 2  
H315 Causes skin irritation.  
Long-term (chronic) aquatic hazard Category 2  
H411 Toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

##### REGULATION (EC) No 1272/2008

Hazard pictograms	:	
Signal word	:	Warning
Hazard statements	:	H226 Flammable liquid and vapour. H315 Causes skin irritation. H332 Harmful if inhaled. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	:	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P284 Wear respiratory protection. P302 + P352 IF ON SKIN: Wash with plenty of water. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308 + P313 IF exposed or concerned: Get medical

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advice/ attention.

### 2.3. Other hazards

Flammable. Do not breathe vapours or spray mist.

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
chlorobenzene	108-90-7 602-033-00-1 203-628-5	Flam. Liq. 3; H226 Acute Tox. 4; H332; Inhalation Skin Irrit. 2; H315 Aquatic Chronic 2; H411	100 %	

### 3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

*General advice:*

First aider needs to protect himself. Move out of dangerous area. Immediately take off contaminated clothing and rinse body with plenty of water.

*Inhalation:*

In case of accident by inhalation: remove casualty to fresh air and keep at rest. Call a physician immediately.

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*Skin contact:*

After contact with skin, wash immediately with plenty of water. If symptoms persist, call a physician.

*Eye contact:*

Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. If eye irritation persists, consult a specialist.

*Ingestion:*

When swallowed, allow water to be drunk. Call a physician immediately.

#### 4.2. Most important symptoms and effects, both acute and delayed

No data available

#### 4.3. Indication of any immediate medical attention and special treatment needed

No data available

See Section 11 for more detailed information on health effects and symptoms. :

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

*Suitable extinguishing media:*

Water spray  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder

*Extinguishing media which shall not be used for safety reasons:*

High volume water jet

#### 5.2. Special hazards arising from the substance or mixture

Heating will cause pressure rise with risk of bursting  
Vapours are heavier than air and may spread along floors.  
Flash back possible over considerable distance.  
Fire may cause evolution of:  
Carbon oxides  
Gaseous hydrogen chloride (HCl).

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### 5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool containers/tanks with water spray.

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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Wear personal protective equipment. Unprotected persons must be kept away. Do not breathe vapours or spray mist.

### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so.

### 6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material.  
Pick for disposal in tightly closed containers

### 6.4. Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

*Advice on safe handling:*

Exhaust ventilation at the object is necessary. Wear personal protective equipment. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.

*Advice on protection against fire and explosion:*

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

*Hygiene measures:*

Keep working clothes separately. Take off all contaminated clothing immediately. Recommended preventive skin protection

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### 7.2. Conditions for safe storage, including any incompatibilities

*Requirements for storage areas and containers:*

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not leave vessels/containers open. Avoid product residues in/on containers.

*Advice on common storage:*

Keep away from oxidizing agents and strongly acid or alkaline materials.

### 7.3. Specific end use(s)

no additional data available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Occupational exposure limits:**

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
chlorobenzene	EH40 WEL SKIN_DES			Can be absorbed through the skin.
chlorobenzene	EH40 WEL			Listed
chlorobenzene	EU ELV STEL	70 mg/m <sup>3</sup> 15 ppm		Indicative
chlorobenzene	EU ELV TWA	23 mg/m <sup>3</sup> 5 ppm		Indicative
chlorobenzene	EH40 WEL STEL	14 mg/m <sup>3</sup> 3 ppm		
chlorobenzene	EH40 WEL TWA	4,7 mg/m <sup>3</sup> 1 ppm		

SKIN\_DES - Skin designation:  
STEL - Short term exposure limit  
TWA - Time weighted average

### DNEL/ PNEC-Values

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Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
chlorobenzene	Workers / Long-term systemic effects		23 mg/m3	Inhalation	
chlorobenzene	Workers / Acute systemic effects		70 mg/m3	Inhalation	
chlorobenzene	Workers / Long-term systemic effects		5mg/kg bw/d	Skin contact	
chlorobenzene	Workers / Acute systemic effects		15mg/kg bw/d	Skin contact	
chlorobenzene	Consumers / Long-term systemic effects		1 mg/m3	Inhalation	
chlorobenzene	Consumers / Acute systemic effects		1 mg/m3	Inhalation	
chlorobenzene	Consumers / Long-term systemic effects		3mg/kg bw/d	Skin contact	
chlorobenzene	Consumers / Acute systemic effects		3mg/kg bw/d	Skin contact	
chlorobenzene	Consumers / Long-term systemic effects		3mg/kg bw/d	Ingestion	
chlorobenzene	Consumers / Acute systemic effects		3mg/kg bw/d	Ingestion	

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Component	Environmental compartment / Value	Remarks
chlorobenzene	Fresh water: 0,032 mg/l	Assessment factor: 10
chlorobenzene	Marine water: 0,0032 mg/l	Assessment factor: 100
chlorobenzene	Sewage treatment plant: 1,4 mg/l	Assessment factor: 100
chlorobenzene	Fresh water sediment: 0,922 mg/kg dw	
chlorobenzene	Marine sediment: 0,0922 mg/kg dw	
chlorobenzene	Soil: 0,166 mg/kg dw	

### 8.2. Exposure controls

#### Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Do not breathe vapours/dust.

#### Engineering measures

Local exhaust

#### Personal protective equipment

##### *Respiratory protection:*

In the case of vapour formation use a respirator with an approved filter.

##### *Hand protection:*

Glove material: Viton®

Break through time: < 480 min

Glove thickness: 0,7 mm

Vitoject® 890

Gloves must be inspected prior to use.

Replace when worn.



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Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.  
Due to varying conditions ( e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.  
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.  
Manufacturer's directions for use should be observed because of great diversity of types .  
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

*Eye protection:*  
Safety goggles

*Skin and body protection:*  
Protective suit

### Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: liquid
Colour	: colourless
Odour	: aromatic
molecular weight	: 112,56 g/mol
Melting point/range	: -45 °C
Boiling point/boiling range	: 130 - 132 °C at 1.013 hPa
Upper explosion limit	: 11 %(V)
Lower explosion limit	: 1,3 %(V)

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Flash point	:	28 °C
Auto-ignition temperature	:	ca.590 °C
Decomposition temperature	:	At normal pressure may be distilled without decomposition.
pH	:	neutral
Viscosity, kinematic	:	No data available
Water solubility	:	slightly soluble
Solubility in other solvents	:	soluble
Partition coefficient: n-octanol/water	:	log Pow 2,84
Vapour pressure	:	12 hPa at 20 °C
Density	:	1,107 - 1,109 g/cm <sup>3</sup> at 20 °C
Relative vapour density	:	No data available

### 9.2 Other Information

Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Evaporation rate	:	No data available
Viscosity, dynamic	:	No data available

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under recommended storage conditions.

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### 10.2. Chemical stability

At normal pressure may be distilled without decomposition.

### 10.3. Possibility of hazardous reactions

With oxidizing agents possible.  
Vapours may form explosive mixture with air.

### 10.4. Conditions to avoid

Heat, flames and sparks.

### 10.5. Incompatible materials

Oxidizing agents

### 10.6. Hazardous decomposition products

Hydrogen chloride gas  
Carbon oxides

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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

*Acute oral toxicity:*

LD50

Species: Rat

Value: > 2.000 mg/kg

Method: OECD Test Guideline 401

*Acute dermal toxicity:*

Not classified due to data which are conclusive although insufficient for classification.

*Acute inhalation toxicity:*

Classification based on Annex VI of regulation 1272/2008/EC.

*Skin irritation:*

Species: Rabbit

Result: Irritating to skin.

Method: OECD Test Guideline 404

*Eye irritation:*

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Species: Rabbit  
Result: slight irritation  
Method: OECD Test Guideline 405

*Respiratory or skin sensitisation:*

Not classified due to data which are conclusive although insufficient for classification.

*Carcinogenicity:*

Note: Not classified due to data which are conclusive although insufficient for classification.

*Germ cell mutagenicity:*

Note: Not classified due to data which are conclusive although insufficient for classification.

*Reproductive toxicity:*

Remarks: Not classified due to data which are conclusive although insufficient for classification.

*Aspiration hazard:*

No data available

### 11.2. Information on other hazards

Endocrine disrupting properties  
No data available

*Other information:*

Solvent vapours have a narcotic effect if inhaled in high concentrations.

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## SECTION 12: Ecological information

### 12.1. Toxicity

*Toxicity to fish:*

LC50

static test

Species: *Lepomis macrochirus* (Bluegill sunfish)

Value: 4,5 mg/l

Exposure time: 96 h

NOEC

Species: *Danio rerio* (zebra fish)

Value: 4,8 mg/l

Exposure time: 28 d

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### *Toxicity to aquatic plants:*

IC50

Species: Pseudokirchneriella subcapitata (green algae)

Value: 12,5 mg/l

Exposure time: 96 h

### *Toxicity to Microorganisms:*

EC50

Species: activated sludge

Value: 140 mg/l

Exposure time: 30 min

Method: OECD 209

### *Toxicity to aquatic invertebrates:*

EC50

Immobilization

Species: Daphnia magna (Water flea)

Value: 26 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

### *Chronic toxicity to aquatic invertebrates:*

NOEC

Species: Daphnia magna (Water flea)

Value: 0,32 mg/l

Exposure time: 16 d

## **12.2. Persistence and degradability**

### *Biodegradability:*

Biodegradation: 15 %

Exposure time: 28 d

Result: Not readily biodegradable.

Method: OECD Test Guideline 301F

## **12.3. Bioaccumulative potential**

No data available

## **12.4. Mobility in soil**

No data available



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**14.5 Environmental hazards**

ADR/RID: yes

Marine pollutant: yes

**14.6 Special precautions for user**

No data available

**14.7 Maritime transport in bulk according to IMO instruments**

No data available

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Basis	Value	Remarks
Directive 2012/18/EC Listed in Regulation : E2: Hazardous to the Aquatic Environment	<b>Quantity:</b> 200.000 kg <b>Quantity:</b> 500.000 kg	
Directive 2012/18/EC Listed in Regulation : P5c: FLAMMABLE LIQUIDS	<b>Quantity:</b> 5.000.000 kg <b>Quantity:</b> 50.000.000 kg	
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1$ % (w/w).

**Poison Control Center**

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+35929154233
Croatia	(+3851)23-48-342

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000

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Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Gifinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

**Other inventory information**

US. Toxic Substances Control Act  
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended  
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



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

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)  
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)  
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

Taiwan Chemical Substance Inventory (TCSI)  
On the inventory, or in compliance with the inventory

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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## SECTION 16: Other information

### Text of H-statements referred to under heading 3

chlorobenzene : H226 Flammable liquid and vapour.  
H332 Harmful if inhaled.  
H315 Causes skin irritation.  
H411 Toxic to aquatic life with long lasting effects.

### Further information

All directives and regulations refer to amended versions.  
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:  
EC European Community  
CAS Chemical Abstracts Service  
DNEL Derived no effect level  
PNEC Predicted no effect level

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vPvB Very persistent and very bioaccumulative substance

PBT Persistent, bioaccumulative und toxic substance

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This information should not constitute a guarantee for any specific product properties.

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