

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

### 1.1 Product identifier

Product name	CHLOROBENZENE
CAS-No.	108-90-7
Product code	05S0024

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

Identified uses	Chemical for analysis and production.
-----------------	---------------------------------------

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

Company	RCI LABSCAN LIMITED. 24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand
Telephone number	(662) 613-7911-4
Fax number	(662) 613-7915

### 1.4 Emergency Telephone Number

Emergency phone	(662) 613-7911-4
-----------------	------------------

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 3), H226  
Acute toxicity, Inhalation (Category 4), H332  
Skin irritation (Category 2), H315  
Chronic aquatic toxicity (Category 2), H411  
For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 Label elements

#### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Warning

Hazard statement(s)

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

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing fume/gas/mist/vapours/spray.

P264	Wash hand thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352	IF ON SKIN: Wash with plenty water.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332 + P317	If skin irritation occurs: Get medical help.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P403 + P235	Store in a well-ventilated place. Keep cool.

**2.3 Other hazards** None

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Synonyms Benzene chloride, Monochlorobenzene, phenyl chloride.

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
108-90-7	203-628-5	602-033-00-1	C <sub>6</sub> H <sub>5</sub> Cl	112.56 g/mol	<=100

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Concentration	Classification
<b>Chlorobenzene</b>		
CAS-No 108-90-7 EC-No 203-628-5 EC-Index-No 602-033-00-1	<=100%	Flammable liquids (Category 3), H226 Acute toxicity, Inhalation (Category 4), H332 Skin irritation (Category 2), H315 Chronic aquatic toxicity (Category 2), H411

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	Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water. If signs of poisoning appear, treat as for inhalation. Obtain medical attention. Wash contaminated clothing before reuse. Contaminated combustible material, e.g. clothing ignites more readily and burns fiercely.
Eye contact	If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. Do not induce vomiting. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus. Obtain medical attention. Never give anything by mouth to an unconscious person.

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

The most important known symptoms and effects are described in section 2.2 and section 11

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

After swallowing, liquid paraffin. Avoid vomiting, risk of aspiration. If victim is unconscious: lateral recumbent position. Summon doctor.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Extinguish with carbon dioxide, dry chemical or foam. In the event of fire, cool tanks with water spray.

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

Vapors may form explosive mixture with air at ambient temperature. Flash back possible over considerable distance.

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

#### 5.4 Further information

Standard procedure for chemical fires. Take measures to prevent electrostatic charging. Prevent firefighting water from entering surface water or groundwater.

### SECTION 6: Accidental release measures

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

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

#### 6.2 Environmental precautions

Contain or absorb leaking liquid with sand or earth, consults an expert. Prevent liquid entering sewers, basements and workpits. If substance has entered a water course or sewer or contaminated soil, advise police.

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

Spillage: May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silica gel or chemical absorbent pads). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere. Transfer to covered steel drums. Dispose of promptly.

#### 6.4 Reference to other sections

For disposal see **Section 13**.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Keep container tightly closed. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not empty into drains.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry, cool and well ventilated place. Keep away from heat and sources of ignition. Keep out of direct sunlight and away from incompatible materials. Store in original container. Electrical equipment should be protected to the appropriate standard.

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

# SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

### Derived No Effect Level (DNEL)

Application Area	Health Effects	Exposure	Value
Worker	Acute Systemic effects	Inhalation	70 mg/m <sup>3</sup>
Worker	Acute Systemic effects	Skin contact	15 mg/kg Body weight
Worker	Long-term Systemic effects	Inhalation	23 mg/m <sup>3</sup>
Worker	Long-term Systemic effects	Skin contact	5 mg/kg Body weight

### Predicted No Effect Concentration (PNEC)

Compartment	Value
Fresh water	0.032 mg/l
Fresh water sediment	0.922 mg/kg
Marine water	0.0032 mg/l
Marine sediment	0.0922 mg/kg
Oral	10 mg/kg
Sewage treatment plant	1.4 mg/l
Soil	0.166 mg/kg

## 8.2 Exposure controls

### Appropriate engineering controls

The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

### Individual protection measures (Personal protective equipment, PPE)

#### Eye/face protection

Goggles giving complete protection to eyes.

#### Skin protection

Chemical resistant apron / flame retardant antistatic protective clothing, heavy duty work shoes.

Handle with gloves

- Full contact wears gloves from viton material.
- Splash contact wears gloves from nitrile rubber material.

The select protective gloves have to satisfy the specifications of EU Directive 89/686 EEC and standard EN 374 derived from it.

#### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Required when vapor/aerosols are generated filter A (EN 141 or EN 14387).

#### Environmental exposure controls

Prevent liquid entering sewers, basements and workpits.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance: Form	Liquid
: Color	Colorless
Odour	Benzene-like
Odour Threshold	Not Available
pH	Neutral at 20°C
Melting point/range	-45 °C
Boiling point/range	132 °C at 1013 hPa
Flash point	28 °C (closed cup)
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	1.3 % (V)
upper	11 % (V)
Vapor Pressure	12 hPa at 20°C
Relative Vapor Density	Not Available
Density	1.110 g/ml at 20°C
Water solubility	0.5 g/l at 20°C
Partition coefficient (n-octanol/water)	log Pow: 2.84
Auto-Ignition temperature	590 °C
Decomposition Temperature	Not Available
Viscosity	0.8 mPa.s at 20°C
Explosive properties	Not Explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Flammable; steam-volatile; incompatible with rubber. Solvent for resin and oils.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Risk of explosion in contact with: sodium, phosphorus trichloride/ sodium, dimethyl sulfoxide (seldom).

The substance can react dangerously with: alkali/alkaline earth metals, oxidizing agents, nitric acid.

### 10.4 Conditions to avoid

Strong heating, flames and sparks.

### 10.5 Incompatible materials

Alkali metals, alkaline earth metals, oxidizing agents, sulfoxides, sodium.

### 10.6 Hazardous decomposition products

Hydrochloric acid, Phosgene, Carbon monoxides, Carbon dioxides (Hazardous decomposition products from under fire condition).

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD<sub>50</sub> (oral, rat): 1100 mg/kg

LC<sub>50</sub> (inhalation, rat): 13.9 mg/l/6h

**Acute oral toxicity**

Symptoms: pain, vomiting, risk of aspiration, diarrhea.

**Acute inhalation toxicity**

After inhalation of vapors: headache

**Skin corrosion/irritation**

After skin contact: drying out effect resulting in rough and chapped skin.

**Serious eye damage/eye irritation**

Not Available

**Respiratory or skin sensitization**

Not Available

**Germ cell mutagenicity**

Not Available

**Carcinogenicity**

Not Available

**Reproductive toxicity**

Not Available

**Teratogenicity**

Not Available

**Specific target organ toxicity (STOT) - single exposure**

Not Available

**Specific target organ toxicity (STOT) - repeated exposure**

Not Available

**Aspiration hazard**

Not Available

**Further information**

Systemic effects; CNS disorders, tachycardia, drop in blood pressure, agitation, spasms, ataxia (impaired locomotor coordination).

Damage of liver and kidneys.

The product should be handled with the care usual when dealing with chemicals.

## SECTION 12: Ecological information

**12.1 Toxicity**

Toxicity to fish	LC <sub>50</sub> Salmo: 10.4 mg/ l/ 96 h.
Toxicity to daphnia and other aquatic invertebrates	EC <sub>50</sub> Daphnia magna: 20 mg/ l/ 48 h.
Toxicity to bacteria	EC <sub>50</sub> activated sludge: 140 mg/l /30 min.
Toxicity to algae	IC <sub>50</sub> Pseudokirchneriella subcapitata (green algae) : 12.5 mg/ l/ 96 h.

**12.2 Persistence and degradability**

Biodegradability	15% /28d. Poor biodegradable.
------------------	-------------------------------

**12.3 Bioaccumulative potential**

Partition coefficient (n-octanol/water)	log Pow: 2.84 (experimental). No Bioaccumulation is to be expected (log P o/w 1-3)
---	---

**12.4 Mobility in soil**

Not Available

**12.5 Other adverse effects**

May cause long-term adverse effects in the aquatic environment.

Do not allow to enter waters, waste water or soil.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

**Contaminated packaging**

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

**SECTION 14: Transport information****Land Transport (ADR/RID)**

UN Number	1134
UN proper shipping name	CHLOROBENZENE
Transport hazard class(es)	3
Packing group	III
Environmental hazards	Yes
Special precautions for user	Yes

**Sea transport (IMDG)**

UN Number	1134
UN proper shipping name	CHLOROBENZENE
Transport hazard class(es)	3
Packing group	III
Marine pollutant	Yes
Special precautions for user	Yes
EmS	F-E S-D

**Air transport (IATA)**

UN Number	1134
UN proper shipping name	CHLOROBENZENE
Transport hazard class(es)	3
Packing group	III
Environmental hazards	Yes
Special precautions for user	No

**River transport (AND/ADNR)**

(Not examined)

## SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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

Not Available

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

## SECTION 16: Other information

### Full text of H-Statements referred to under sections 2 and 3

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

### Recommended restrictions

Take notice of labels and safety data sheets for the working. Chemicals Take necessary action to avoid static electricity discharge.

### Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.

Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.

Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany, Source: IFA for Databases on hazardous substances (GESTIS).

### Further information

Contact to RCI Labscan Limited.

### Revision Date

01/04/2021

---

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 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.