

### 1. General Statement

The mixture of 1,3-dichlorobenzene and 1,4-dichlorobenzene is a chlorinated aromatic compound blend commonly used in industrial applications as solvents, chemical intermediates, or insect repellents. Both components are solid at room temperature and possess similar physical and chemical properties. Due to their toxicity and potential health hazards especially from inhalation and prolonged exposure handling this mixture requires strict adherence to safety protocols, including the use of personal protective equipment and adequate ventilation, to minimize risks to human health and the environment.

### 2. Chemical identity

Name : 1,3-Dichlorobenzene mixture 80%  
CAS number(s) : 541-73-1  
EC number : 208-792-1  
Molecular formula : C<sub>6</sub>H<sub>4</sub>Cl<sub>2</sub>  
Structure :



### 3. Uses and Benefits

1,3-Dichlorobenzene mixture 80% is used as an intermediate step in further manufacturing of another substance. This substance is used in the following products such as laboratory chemicals. It is also used as a fumigant and insecticide.

### 4. Physical / chemical properties

Property	Value
Physical state :	Liquid
Colour :	Colourless
Odour :	No data available
pH :	No data available
Melting point :	No data available
Boiling point :	No data available

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Flash point :	63.6°C (Theoretical calculation)
Density :	≈ 1.32 g/cm <sup>3</sup> by (Theoretical calculation)
Solubility in Water:	No data available

## 5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal )	Harmful if swallowed
Irritation / corrosion Skin / eye/ respiratory tract	Causes serious eye irritation
Respiratory or skin sensitisation	NA
Toxicity after repeated exposure Oral / inhalation / dermal	NA
Genotoxicity / Mutagenicity	NA
Carcinogenicity	Suspected of causing cancer
Toxicity for reproduction	NA

## 6. Environmental Effects

Effect Assessment	Result
Aquatic toxicity	No
Fate and behavior	Result
Persistence and degradability	Non degradable in the soil, Not readily biodegradable in water.
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

## 7. Exposure

### Human health

The mixture of 1,3-dichlorobenzene (80%) and 1,4-dichlorobenzene (20%) poses significant health risks, particularly with prolonged or high-level exposure. While both chemicals are toxic, 1,4-dichlorobenzene is especially concerning due to its classification as a possible human carcinogen culture exposure can lead to eye, skin, and respiratory irritation, along with symptoms like headache, dizziness, and nausea. Chronic exposure may cause organ damage, particularly to the liver and kidneys, and possibly contribute to neurological effects. Inhalation is the most common and concerning route of exposure. The exposure must be kept as minimum as possible by the use of appropriate risk management measures a suitable collective and

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personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers. Careless handling or accidental spillage of the chemical could result in exposure to potentially hazardous levels of chemicals. Industrial workers should ensure that they follow the advice found in the extended safety data sheet (SDS).

### Environment

Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. Spillage shall be quickly collected in the event of an accidental release. More information about release measures and accidental release measures are available in the extended safety data sheet.

## 8. Risk Management Recommendations

### Human health measures

<b>Organizational</b>	A basic standard of occupational hygiene is recommended. Ensure operatives are well informed of the hazards and trained to minimise exposures. Ensure regular inspection and maintenance of equipment and machines. Handle and store according to the indications of the Safety Data Sheet.	
<b>Protection</b>	Eye protection:	Safety glasses with side shields,Chemical goggles, Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.
	Skin and body protection:	Protective clothing (EN 14605 or EN 13034)
	Respiratory protection:	Full face mask with filter type A at conc. in air > exposure limit
<b>Engineering controls</b>	Ensure good ventilation of the work station.	
<b>Environment protective measures</b>		
Avoid release to the environment.		

## 9. First-aid measures

**First-aid measures after inhalation:** Remove the person to fresh air and keep them comfortable for breathing.

**First-aid measures after skin contact:** Wash skin with plenty of water.

**First-aid measures after eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**First-aid measures after ingestion :** Rinse mouth. Call a poison center or a doctor if you feel unwell.

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### 10. Fire-fighting measures

#### **Extinguishing media**

**Suitable extinguishing media:**Water spray. Dry powder. Foam. Carbon dioxide.

**Unsuitable extinguishing media :** Do not use a heavy water stream.

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

**Hazardous decomposition products in case of fire :** Toxic fumes may be released.

#### **Advice for firefighters**

**Precautionary measures fire :**Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.

**Firefighting instructions :** Fight fire from safe distance and protected location. Do not enter a fire area without proper protective equipment, including respiratory protection.

### 11. Accidental release measures

**Protective equipment :** Wear recommended personal protective equipment.Chemical safety goggles + face shield

**Environmental precautions :** Avoid release to the environment.

**For containment :** Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leaks without risks if possible.

### 12. Disposal consideration

**Regional legislation (waste) :** Disposal must be done according to official regulations.

**Waste treatment methods :** Dispose of contents/container in accordance with licensed collector's sorting instructions.

**Sewage disposal recommendations :** Disposal must be done according to official regulations.

### 13. Handling and storage

**Precautions for safe handling:** Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle it until all safety precautions have been read and understood. Wear personal protective equipment.Avoid contact with skin and eyes.

**Hygiene measures:**Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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### 14. Classification and Labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Warning

Hazard statements (GHS US)

: H302 - Harmful if swallowed

H319 - Causes serious eye irritation

H351 - Suspected of causing cancer.

Precautionary statements (GHS US)

: P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P264 - Wash hands, forearms and face thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.

P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P330 - Rinse mouth.

P337+P313 - If eye irritation persists: Get medical advice or attention.

P405 - Store locked up.

P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local regional national and/or international regulations.

### 15. Conclusion

The mixture of 1,3-dichlorobenzene (80%) and 1,4-dichlorobenzene (20%) is a toxic and potentially hazardous chemical combination that poses acute and chronic health risks to humans, particularly through inhalation, skin contact, and prolonged exposure. This mixture must be treated as a hazardous substance requiring strict control measures. Proper PPE, exposure monitoring, and worker training are essential to prevent adverse health effects. Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. The exposure must be kept as minimum as possible by the use of appropriate risk management measures as suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers.

### 16. Contact Information within company

#### **Manufacturer**

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This GPS safety summary is intended to give general information about the health, safety and environment and not intended to provide in-depth details. To obtain the most accurate and current

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information, consult the appropriate Safety Data Sheet (SDS) prior to use of the material named herein.