GPS Safety Summary
1,2,4-Trichlorobenzene

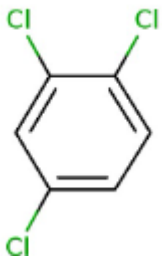
Reference number: AIL-GPS-040 Issue date: 28/03/2025 Version: 1.0 **CL-4: PUBLIC**

1. General Statement

1,2,4-Trichlorobenzene is a colorless aromatic odor.Combustible substance, poorly flammable.Practically insoluble in water.Heavier than water.Low or very low-volatile.Acute or chronic health hazards result from the substance.The substance is hazardous to the aquatic environment. The substance can react dangerously with alkali/alkaline earth metals strong oxidizing agents.

2. Chemical identity

Name : 1,2,4-Trichlorobenzene
CAS number(s) :120-82-1
EC number : 204-428-0
Molecular formula : C6H3Cl3
Structure :



3. Uses and Benefits

1,2,4-Trichlorobenzene is a methylating agent used in formulation or re-packing, at industrial sites and in manufacturing.This substance has an industrial use resulting in manufacture of another substance (use of intermediates).

4. Physical / chemical properties

Property	Value
Physical state :	Liquid
Colour :	Colourless.
Odour :	Pleasant odour Aromatic odour
pH :	No data available
Melting point	17 °C
Boiling point :	214 °C (1013 hPa)
Flash point :	110 °C (Closed cup, 1013 hPa)
Density :	1460 kg/m3 (20 °C)

Solubility in Water:	0.004 g/100ml

5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal)	Harmful if swallowed.
Irritation / corrosion Skin / eye/ respiratory tract	Causes skin irritation
Respiratory or skin sensitisation	NA
Toxicity after repeated exposure Oral / inhalation / dermal	NA
Genotoxicity / Mutagenicity	NA
Carcinogenicity	NA
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	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

7. Exposure

Human health

The substance is harmful if swallowed. Causes skin irritation.Workers in production of trichlorobenzene showed changes to the skin of the face (dryness, hyperpigmentation, atrophy as well as comedones without inflammation). The most likely route of human exposure (workers) is through skin. In industrial settings, ingestion is not an anticipated route of exposure. Workers may be exposed during (un)loading, mixing, sampling, analysis or maintenance operations and particularly in case of batch processes.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.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

Organizational	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.	
Protection	Eye protection:	Face shield (EN 166)
	Skin and body protection:	Wear suitable protective clothing (Avoid inhalation or skin contact)
	Respiratory protection:	Full face mask with filter type A at conc. in air > exposure limit
Engineering controls	No additional information available	
Environment protective measures		
Products must not be released into water without pre-treatment.		

9. First-aid measures

First-aid measures after inhalation :Remove victims into fresh air. In case of respiratory problems, consult a doctor/medical service.

First-aid measures after skin contact :If possible, wipe up/dry remove chemicals. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

First-aid measures after eye contact :Rinse immediately with (lukewarm) water. Remove contact lenses, if present and easy to do.Continue rinsing.

First-aid measures after ingestion : Rinse mouth with water. Immediately consult a doctor/medical service. Do not wait for symptoms to occur to consult the Poison Center.

10. Fire-fighting measures

Extinguishing media
Suitable extinguishing media : Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (not alcohol-resistant).

Unsuitable extinguishing media :Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

Special hazards arising from the substance or mixture
Hazardous decomposition products in case of fire :On burning: release of toxic and corrosive gases/vapours (phosgene, hydrogen chloride, carbon monoxide - carbon dioxide).

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 :Gloves (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034). Reactivity hazard: self-contained breathing apparatus (EN 136 + EN 137). Reactivity hazard: gas-tight suit (EN 943).

Environmental precautions: Prevent soil and water pollution. Prevent spreading in sewers.

For containment : Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply.Dam up the liquid spill. If reacting: dilute toxic gas/vapour with water spray. Take account of toxic/corrosive precipitation water.

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 :Use earthed equipment. Keep away from naked flames/heat. In a finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing.Keep the container tightly closed. Do not discharge the waste into the drain.

Hygiene measures : Observe normal hygiene standards.

14. Classification and Labeling

Hazard pictograms (GHS US)	:	
Signal word (GHS US)	:	Warning
Hazard statements (GHS US)	:	H302 - Harmful if swallowed H315 - Causes skin irritation
Precautionary statements (GHS US)	:	P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P280 - Wear protective gloves. P301+P312 - If swallowed: Call a POISON CENTER, a doctor if you feel unwell. P302+P352 - If on skin: Wash with plenty of water. P321 - Specific treatment (see supplemental first aid instruction on this label). P330 - Rinse mouth. P332+P313 - If skin irritation occurs: Get medical advice or attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P501 - Dispose of hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

15. Conclusion

1,2,4-Trichlorobenzene is a colorless aromatic odor.Combustible substance, poorly flammable.Practically insoluble in water.Heavier than water.Low or very low-volatile.Acute or chronic health hazards result from the substance.The substance is hazardous to the aquatic environment. The substance can react dangerously with alkali/alkaline earth metals strong oxidizing agents.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 environmental and not intended to provide in-depth details. To obtain the most accurate and current information, consult the appropriate Safety Data Sheet (SDS) prior to use of the material named herein.