

Material Safety Data Sheet

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Version 1.5

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name	1,2-DICHLOROBENZENE
Product Number	65152
Company	Sigma-Aldrich Pty. Ltd. 12 Anella Avenue Castle Hill NSW 2154 Australia
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
1,2-DICHLOROBENZENE	95-50-1	202-425-9	602-034-00-7

Formula	C6H4Cl2
Molecular Weight	147 AMU
Synonyms	Benzene, 1,2-dichloro- * Chloroben * o-Dichlorobenzene * o-Dichlor benzol * o-Dichlorobenzene * 1,2-Dichlorobenzene * o-Dichlorobenzene (ACGIH:OSHA) * Dilatin DB * Dizene * Dowtherm E * NCI-C54944 * Orthodichlorobenzene * Orthodichlorobenzol * Special termite fluid * Termitkil

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Harmful if swallowed. Irritating to eyes, respiratory system and skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of

water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.
Combustible liquid.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Avoid prolonged or repeated exposure. Do not get in eyes, on skin, on clothing.

STORAGE

Conditions of Storage: Keep tightly closed. Keep away from heat and open flame. Store in a cool dry place.

SPECIAL REQUIREMENTS: Light sensitive.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

EXPOSURE LIMITS

Country	Source	Type	Value
Poland		NDS	90 MG/M3
Poland		NDSch	180
Poland		NDSP	-

EXPOSURE LIMITS - EUROPEAN UNION

Source	Type	Value
OEL	OEL	122 mg/m3
		20 ppm

Remarks: Skin

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	150 mg/m3
		25 ppm

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	61 mg/m3
		10 ppm

Remarks: 4

Remarks: H,Y

EXPOSURE LIMITS - NORWAY

Source	Type	Value
	OEL	150 mg/m3
		25 ppm

Remarks: HT

EXPOSURE LIMITS - SWITZERLAND

Source	Type	Value
OEL	OEL	300 mg/m3
		50 ppm

Remarks: C

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	STEL	306 mg/m3
		50 ppm

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Color: Almost colorless Form: Clear liquid	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	179 - 180 °C	
MP/MP Range	-16 °C	
Flash Point	66 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	648 °C	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	Lower: 2.2 % Upper: 9.2 %	
Vapor Pressure	1.2 mmHg	20 °C
SG/Density	1.305 g/cm3	
Partition Coefficient	N/A	
Viscosity	0.001 Pas	

Vapor Density	5.1 g/l
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions to Avoid: Light.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Hydrogen chloride gas.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: CZ4500000

ACUTE TOXICITY

LD50
Oral
Rat
500 mg/kg

LD50
Intraperitoneal
Rat
840 MG/KG

LD50
Subcutaneous
Rat
5 GM/KG

LD50
Oral
Mouse
4386 mg/kg

LD50
Intraperitoneal
Mouse
1228 MG/KG

LD50
Oral
Rabbit
500 mg/kg

LD50
Skin
Rabbit
> 10000 mg/kg

IRRITATION DATA

Eyes
Rabbit
100 mg
30S
Remarks: Rinsed

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes eye irritation.
Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.
Ingestion: Harmful if swallowed.

TARGET ORGAN INFORMATION

Liver. Kidneys. Central nervous system.

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC CARCINOGEN LIST

Rating: Group 3

CHRONIC EXPOSURE - MUTAGEN

Rat
250 MG/KG
Intraperitoneal
sperm

Mouse
187 MG/KG
Intraperitoneal
24H
Micronucleus test

Mouse
6500 UG/L (+S9)
Cell Type: lymphocyte
Mutation in microorganisms

Hamster
59 MG/L
Cell Type: ovary
Sister chromatid exchange

CHRONIC EXPOSURE - TERATOGEN

Species: Rat
Dose: 200 PPM/6H
Route of Application: Inhalation
Exposure Time: (6-15D PREG)

Result: Specific Developmental Abnormalities: Musculoskeletal system.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 500 PPM/6H
Route of Application: Inhalation
Exposure Time: (6-15D PREG)
Result: Maternal Effects: Other effects. Effects on Embryo or Fetus: Fetal death.

Species: Rat
Dose: 50 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (1D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.

14 - Transport Information

RID/ADR

UN#: 1591
Class: 6.1
PG: III
Proper Shipping Name: o-Dichlorobenzene

IMDG

UN#: 1591
Class: 6.1
PG: III
Proper Shipping Name: ORTHO-DICHLOROBENZENE
Marine Pollutant: No
Severe Marine Pollutant: No

IATA

UN#: 1591
Class: 6.1
PG: III
Proper Shipping Name: o-Dichlorobenzene
Inhalation Packing Group I: No

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 602-034-00-7
INDICATION OF DANGER: Xn N
Harmful. Dangerous for the environment.
R-PHRASES: 22 36/37/38 50/53

Harmful if swallowed. Irritating to eyes, respiratory system and skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-PHRASES: 23 60 61

Do not breathe vapor. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 2

SWITZERLAND

SWISS POISON CLASS: 4

NORWAY

Labelling for organic solvents where the package is 1 liter or more.

YL-tall m3/l: 6113

YL-group: 5

Risk phrases: 20

Harmful by inhalation.

Safety phrases: 38 42 210

In case of insufficient ventilation, wear suitable respiratory equipment. During fumigation/spraying wear suitable respiratory equipment. Use compressed air- or fresh air line breathing apparatus in confined spaces.

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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