



MATERIAL SAFETY DATA SHEET

O-DICHLOROBENZENE

SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:
O-DICHLOROBENZENE

Synonyms : 1,2-dichlorobenzene; ortho-Dichlorobenzene; DCB
CAS No. : 95-50-1
Molecular Weight : 147.00
Chemical Formula : C₆H₄Cl₂
Product Codes : Un Listed
J.T. Baker : 9217, 9233
Mallinckrodt : 1830

Company Information:
LEONID CHEMICALS
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SECTION 2- COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient : o-Dichlorobenzene
P-Dichlorobenzene
CAS No. : 95-50-1
106-46-7
% : > 99 %
0 - 0.16 %
Hazardous : Yes
Yes

SECTION 3- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER! ASPIRATION MAY CAUSE LUNG DAMAGE. VAPORS CAUSE IRRITATION TO EYES AND RESPIRATORY TRACT. LIQUID CAUSES SKIN IRRITATION AND SEVERE EYE IRRITATION. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS LIVER, KIDNEYS AND BLOOD. COMBUSTIBLE LIQUID AND VAPOR. POSSIBLE CANCER HAZARD. CONTAINS P-DICHLOROBENZENE WHICH MAY CAUSE CANCER BASED ON ANIMAL DATA. Risk of cancer depends upon duration and level of exposure

J.T. Baker SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating : 2 - Moderate
Flammability Rating : 2 - Moderate
Reactivity Rating : 0 - None
Contact Rating : 1 - Slight
Lab Protective Equip : GOGGLES; LAB COAT; VENT HOOD; PROPER



Storage Color Code : GLOVES; CLASS B EXTINGUISHER
Red (Flammable)

Potential Health Effects

Inhalation:

Causes irritation to the respiratory tract. Can cause headache, nausea, swelling around the eyes, runny nose, loss of appetite and weight loss. Higher concentrations may cause drowsiness, central nervous system depression, kidney and liver damage, unconsciousness, and death.

Ingestion:

Toxic! A liver and kidney poison. May cause systemic poisoning with/symptoms paralleling inhalation. May be an aspiration hazard if swallowed.

Skin Contact:

Skin contact causes irritations and possibly burns if contact is repeated or prolonged. May be absorbed through the skin.

Eye Contact:

Vapors cause irritation, redness, and pain. Contact with liquid may cause burning of the eyes and tissue damage.

Chronic Exposure:

Chronic exposure may damage blood, liver and kidneys. p-Dichlorobenzene is a possible carcinogen. Prolonged or repeated skin exposure may cause dermatitis and blisters. Prolonged or repeated exposure through any route may cause symptoms paralleling acute inhalation.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin problems, kidney or liver damage may be more susceptible to the affects of this material.

SECTION 4- FIRST AID MEASURES

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

Aspiration hazard. If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Call a physician immediately.

Skin Contact:

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

SECTION 5- FIRE FIGHTING MEASURES

Fire:
Flash point : 66C (151F) CC
Autoignition temperature : 648C (1198F)
Flammable limits in air % by volume:
lcl: 2.2; ucl: 9.2
Combustible.

Explosion:
Above flash point, vapor-air mixtures are explosive within flammable limits noted above.

Fire Extinguishing Media:
Water spray, dry chemical, alcohol foam, or carbon dioxide. Water spray may be used to keep fire exposed containers cool.

Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Combustion by-products include phosgene and hydrogen chloride gases.

SECTION 6- ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

J. T. Baker SOLUSORB® solvent adsorbent is recommended for spills of this product.

SECTION 7 - HANDLING and STORAGE

Keep in a tightly closed container. Store in a cool, dry, ventilated area away from sources of heat or ignition. Protect against physical damage. Store separately from reactive or combustible materials, and out of direct sunlight. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Airborne Exposure Limits:
-OSHA Permissible Exposure Limit (PEL):
50 ppm Ceiling limit
for p-Dichlorobenzene: 75 ppm (TWA)
-ACGIH Threshold Limit Value (TLV):
25 ppm (TWA) 50 ppm (STEL), listed as A4, Not classifiable as a human carcinogen
for p-Dichlorobenzene: 10 ppm (TWA), listed as A3, animal carcinogen.

Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred

because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge and dust/mist filter may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres. This compound possibly exists in both particulate and vapor phase. A dust/mist prefilter should be used for the particulate.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Colorless to yellowish liquid.
Odor	:	Pleasant odor.
Solubility	:	Practically insoluble in water.
Specific Gravity	:	1.30 @ 20C/4C
pH	:	No information found.
% Volatiles by volume @ 21C (70F)	:	No information found.
Boiling Point	:	180C (356F)
Melting Point	:	-17.6C (0F)
Vapor Density (Air=1)	:	5.1
Vapor Pressure (mm Hg)	:	1.2 @ 20C (68F)
Evaporation Rate (BuAc=1)	:	< 1

SECTION 10 - STABILITY AND REACTIVITY

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products

May emit oxides of carbon and hydrogen chloride gas when heated to decomposition. May produce carbon monoxide, carbon dioxide, hydrogen chloride and phosgene when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Strong oxidizers, aluminum or aluminum alloys.

Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.

SECTION 11 - TOXICOLOGICAL INFORMATION

Oral rat LD50: 189 mg/kg Skin rabbit LD50: 1010 mg/kg Investigated as a mutagen.

NTP Carcinogen

Ingredient	:	o-Dichlorobenzene (95-50-1)
	:	p-Dichlorobenzene (106-46-7)
Known	:	No
	:	No
Anticipated	:	No
	:	Yes
IARC Category	:	3
	:	2B

SECTION 12 - ECOLOGICAL INFORMATION

Environmental Fate:

When released into the soil, this material may biodegrade to a moderate extent. When released into the soil, this material may leach into groundwater. When released into the soil, this material may evaporate to a moderate extent. When released into water, this material may biodegrade to a moderate extent. When released into water, this material may evaporate to a moderate extent. Although this material has a relatively short half-life in water, it can also readily be adsorbed to sediment and persist for decades. When released into water, this material is expected to have a half-life between 10 and 30 days. This material has an experimentally-determined bioconcentration factor (BCF) of greater than 100. This material may bioaccumulate to some extent. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into air, this material is expected to have a half-life between 10 and 30 days.

Environmental Toxicity:

No information found.

SECTION 13 - DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14 - TRANSPORT INFORMATION

Domestic (Land, D.O.T.)

Proper Shipping Name	:	O-DICHLOROBENZENE
Hazard Class	:	6.1
UN/NA	:	Un1591
Packing Group	:	III
Information reported for product/size	:	4L

International (Water, I.M.O.)

Proper Shipping Name : ORTHO-DICHLOROBENZENE
Hazard Class : 6.1
UN/NA : Un1591
Packing Group : III
Information reported for product/size : 4L

International (Air, I.C.A.O.)

Proper Shipping Name : ORTHO-DICHLOROBENZENE
Hazard Class : 6.1
UN/NA : Un1591
Packing Group : III
Information reported for product/size : 4L

SECTION 15 - REGULATORY INFORMATION

Chemical Inventory Status - Part 1

Ingredient : o-Dichlorobenzene (95-50-1)
: p-Dichlorobenzene (106-46-7)
TSCA : Yes
: Yes
EC : Yes
: Yes
Japan : Yes
: Yes
Australia : Yes
: Yes

Chemical Inventory Status - Part 2

Ingredient : o-Dichlorobenzene (95-50-1)
: p-Dichlorobenzene (106-46-7)
Canada
Korea : Yes
: Yes
DSL : Yes
: Yes
NDSL : No
: No
Phil : Yes
: Yes

Federal, State & International Regulations - Part 1

Ingredient : o-Dichlorobenzene (95-50-1)
: p-Dichlorobenzene (106-46-7)

SARA 302

RQ : No
: No
TPQ : No
: No

SARA 313

List : Yes
: Yes
Chemical Catg: No

: No

Federal, State & International Regulations - Part 2

Ingredient : o-Dichlorobenzene (95-50-1)
: p-Dichlorobenzene (106-46-7)

CERCLA : 100
: 100

RCRA
261.33 : U070
: U070

TSCA
8(d) : No
: No

Chemical Weapons Convention : No TSCA 12(b): Yes CDTA: Yes
SARA 311/312 : Acute: Yes Chronic: Yes Fire: Yes Pressure: No
Reactivity : No (Mixture / Liquid)

WARNING:

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

Australian Hazchem Code : 2Z
Poison Schedule : None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

SECTION 16 - OTHER INFORMATION

NFPA Ratings: Health: 2 Flammability: 2 Reactivity: 0

Label Hazard Warning:

DANGER! ASPIRATION MAY CAUSE LUNG DAMAGE. VAPORS CAUSE IRRITATION TO EYES AND RESPIRATORY TRACT. LIQUID CAUSES SKIN IRRITATION AND SEVERE EYE IRRITATION. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS LIVER, KIDNEYS AND BLOOD. COMBUSTIBLE LIQUID AND VAPOR. POSSIBLE CANCER HAZARD. CONTAINS P-DICHLOROBENZENE WHICH MAY CAUSE CANCER BASED ON ANIMAL DATA. Risk of cancer depends upon duration and level of exposure.

Label Precautions:

Do not breathe vapor.
Do not get in eyes, on skin, or on clothing.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.
Keep away from heat and flame

Label First Aid:

Aspiration hazard. If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Call a physician immediately. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If

breathing is difficult, give oxygen. Get medical attention.

Product Use:

Laboratory Reagent.

Revision Information:

No Changes.

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