Tel: 514-956-7503
Fax: 514-956-7504
Internet: www.megs.ca
Email : support@megs.ca

Montreal	St-Laurent	Tel : 514-956-7503	Fax : 514-956-7504
Ottawa	Nepean	Tel : 613-226-4228	Fax : 613-226-4229
Quebec	Quebec	Tel : 418-834-7447	Fax : 418-834-3774

CHLOROBENZENE- MATERIAL SAFETY DATA SHEET

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24 Hour EMERGENCY CONTACT

U.S- CHEMTREC 1-800-424-9300

CANADA- CANUTEC 613-996-6666

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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Matheson Tri-Gas, Inc.

The telephone numbers listed below are emergency numbers, please contact your local branch for routine inquiries.

USA	CANADA
959 Route 46 East	530 Watson Street
Parsippany, New Jersey	Whitby, Ontario
07054-0624 USA	L1N 5R9 Canada
Phone: 973-257-1100	**Phone:** 905-668-3570

SUBSTANCE: CHLOROBENZENE

SYMBOL: C_6H_5Cl

TRADE NAMES/SYNONYMS:
PHENYL CHLORIDE; MONOCHLOROBENZENE; CP 27; I.P. CARRIER T 40; MCB; TETROSIR SP; U037; STCC 4909153; UN 1134; MONOCHLOROBENZOL; BENZENE CHLORIDE; B-224; B-255; BBENZENE, CHLORO; MAT04730; RTECS CZ0175000

CHEMICAL FAMILY: halogenated, aromatic

CREATION DATE: Jan 24 1989
REVISION DATE: Mar 16 1999

2. COMPOSITION, INFORMATION ON INGREDIENTS

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COMPONENT: CHLOROBENZENE

CAS NUMBER: 108-90-7

EC NUMBER (EINECS): 203-628-5

EC INDEX NUMBER: 602-033-00-1

PERCENTAGE: 100.0

3. HAZARDS IDENTIFICATION

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NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=3 REACTIVITY=0

WHMIS CLASSIFICATION: BD2

EC CLASSIFICATION (ASSIGNED):
Flammable
Xn Harmful
N Dangerous for the Environment

R 10-20-51/53

EC Classification may be inconsistent with independently-researched data.

EMERGENCY OVERVIEW:
Color: colorless

Physical Form: liquid

Odor: almond odor

Major Health Hazards: harmful if inhaled, respiratory tract irritation, skin irritation, eye irritation, central nervous system depression

Physical Hazards: Flammable liquid and vapor. Vapor may cause flash fire.

POTENTIAL HEALTH EFFECTS:

INHALATION:
Short Term Exposure: irritation, headache, drowsiness, symptoms of drunkenness, bluish skin color, coma
Long Term Exposure: tingling sensation, liver damage

SKIN CONTACT:
Short Term Exposure: irritation, rash
Long Term Exposure: burns

EYE CONTACT:
Short Term Exposure: irritation
Long Term Exposure: same as effects reported in short term exposure

INGESTION:
Short Term Exposure: nausea, vomiting, stomach pain, headache, symptoms of drunkenness, bluish skin color, coma
Long Term Exposure: liver damage

CARCINOGEN STATUS:
OSHA: N
NTP: N
IARC: N

4. FIRST AID MEASURES

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INHALATION:
Remove from exposure immediately. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention.

SKIN CONTACT:
Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed.

EYE CONTACT:
Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

INGESTION:
If vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

NOTE TO PHYSICIAN:
For ingestion, consider gastric lavage. Consider oxygen.

5. FIRE FIGHTING MEASURES

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FIRE AND EXPLOSION HAZARDS:
Severe fire hazard. Moderate explosion hazard. Vapor/air mixtures are explosive above flash point. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.

EXTINGUISHING MEDIA:
regular dry chemical, carbon dioxide, water, regular foam

Large fires: Use regular foam or flood with fine water spray.

FIRE FIGHTING:
Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Evacuation radius: 800 meters (1/2 mile). Do not attempt to extinguish fire unless flow of material can be stopped first. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Water may be ineffective.

FLASH POINT:
82 F (28 C) (CC)

LOWER FLAMMABLE LIMIT:
1.3%

UPPER FLAMMABLE LIMIT:
7.1%

AUTOIGNITION:
1099 F (593 C)

FLAMMABILITY CLASS (OSHA):
IC

6. ACCIDENTAL RELEASE MEASURES

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AIR RELEASE:
Reduce vapors with water spray.

SOIL RELEASE:
Trap spilled material at bottom in deep water pockets, excavated holding areas or within sand bag barriers. Dike for later disposal. Absorb with sand or other non-combustible material. Collect with absorbent into suitable container.

WATER RELEASE:
Absorb with activated carbon. Remove trapped material with suction hoses. Collect spilled material using mechanical equipment.

OCCUPATIONAL RELEASE:
Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry. Reportable Quantity (RQ): Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

7. HANDLING AND STORAGE

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Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Grounding and bonding required. Store with flammable liquids. Store outside or in a detached building. Keep separated from incompatible substances. Keep separated from incompatible substances.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

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EXPOSURE LIMITS:
CHLOROBENZENE:
75 ppm (350 mg/m3) OSHA TWA
10 ppm (46 mg/m3) ACGIH TWA

VENTILATION: Provide local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.
1000 ppm
Any supplied-air respirator.
Any powered, air-purifying respirator with organic vapor cartridge(s).
Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
Any air-purifying respirator with a full facepiece and an organic vapor canister.
Any self-contained breathing apparatus with a full facepiece.
Any supplied-air respirator with a full facepiece.
Escape -
Any air-purifying respirator with a full facepiece and an organic vapor canister.
Any appropriate escape-type, self-contained breathing apparatus.
For Unknown Concentrations or Immediately Dangerous to Life or Health -
Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
Any self-contained breathing apparatus with a full facepiece.

9. PHYSICAL AND CHEMICAL PROPERTIES

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PHYSICAL STATE: liquid

COLOR: colorless

ODOR: almond odor

MOLECULAR WEIGHT: 112.56

MOLECULAR FORMULA: C6-H5-CL

BOILING POINT: 270 F (132 C)

FREEZING POINT: -51 F (-46 C)

VAPOR PRESSURE: 8.8 mmHg @ 20 C

VAPOR DENSITY (air=1): 3.9

SPECIFIC GRAVITY (water=1): 1.107 @ 20/4 C

WATER SOLUBILITY: 0.1%

PH: Not available

VOLATILITY: Not available

ODOR THRESHOLD: 0.21 ppm

EVAPORATION RATE: 1 (butyl acetate=1)

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

SOLVENT SOLUBILITY:
Soluble: alcohol, ether, chloroform, benzene, carbon disulfide, carbon tetrachloride

10. STABILITY AND REACTIVITY

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REACTIVITY:
Stable at normal temperatures and pressure.

CONDITIONS TO AVOID:
Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Keep out of water supplies and sewers.

INCOMPATIBILITIES:
combustible materials, oxidizing materials, metals

HAZARDOUS DECOMPOSITION:
Thermal decomposition products: phosgene, halogenated compounds, oxides of carbon

POLYMERIZATION:
Will not polymerize.

11. TOXICOLOGICAL INFORMATION

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CHLOROBENZENE:

TOXICITY DATA:
2965 ppm inhalation-rat LC50; 1110 mg/kg oral-rat LD50

CARCINOGEN STATUS:
ACGIH: A3 -Animal Carcinogen

LOCAL EFFECTS:
Irritant: inhalation, skin, eye

ACUTE TOXICITY LEVEL:
Moderately Toxic: inhalation, ingestion

TARGET ORGANS:
central nervous system

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
kidney disorders, liver disorders, respiratory disorders, skin disorders and allergies

TUMORIGENIC DATA:
Available.

MUTAGENIC DATA:
Available.

REPRODUCTIVE EFFECTS DATA:
Available.

ADDITIONAL DATA:
Alcohol may enhance the toxic effects.

12. ECOLOGICAL INFORMATION

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ECOTOXICITY DATA:

FISH TOXICITY:
10000 ug/L 96 hour(s) LC50 (Mortality) Sheepshead minnow (Cyprinodon variegatus)

INVERTEBRATE TOXICITY:
1720 ug/L 96 hour(s) LC50 (Mortality) Fleshy prawn (Penaeus chinensis)

ALGAL TOXICITY:
343000 ug/L 96 hour(s) EC50 (Photosynthesis) Diatom (Skeletonema costatum)

FATE AND TRANSPORT:

BIOCONCENTRATION:
4185 ug/L 48 day(s) BCF (Residue) Green algae (Oedogonium cardiacum) 1.01 ug/L

13. DISPOSAL CONSIDERATIONS

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Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. Hazardous Waste Number(s): D021. Dispose of in accordance with U.S. EPA 40 CFR 262 for concentrations at or above the Regulatory level. Regulatory level- 100.0 mg/L. Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

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U.S. DOT 49 CFR 172.101. SHIPPING NAME-UN NUMBER; HAZARD CLASS; PACKING GROUP; LABEL:
Chlorobenzene-UN1134; 3; III; Flammable liquid

15. REGULATORY INFORMATION

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U.S. REGULATIONS:
TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Y
Monochlorobenzene
CAS NUMBER: 108-90-7
SECTION 4

CERCLA SECTION 103 (40CFR302.4): Y
Chlorobenzene: 100 LBS RQ

SARA SECTION 302 (40CFR355.30): N

SARA SECTION 304 (40CFR355.40): N

SARA SECTION 313 (40CFR372.65): Y
Chlorobenzene

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):
ACUTE: Y
CHRONIC: N
FIRE: Y
REACTIVE: N
SUDDEN RELEASE: N

OSHA PROCESS SAFETY (29CFR1910.119): N

STATE REGULATIONS:
California Proposition 65: N

EUROPEAN REGULATIONS:

EC NUMBER (EINECS): 203-628-5

EC RISK AND SAFETY PHRASES:

R 10	Flammable.
R 20	Harmful by inhalation.
R 51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S 2	Keep out of reach of children.
S 24/25	Avoid contact with skin and eyes.
S 61	Avoid release to the environment. Refer to special instructions/Safety data sheets.

16. OTHER INFORMATION

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