

**Dichloromethane (BDH1113-19L, BDH1113-204L, BDH1113-4LG)****00000011714**

Version 1

Revision Date 06/20/2012

Print Date 06/20/2012

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Dichloromethane (BDH1113-19L, BDH1113-204L, BDH1113-4LG)

MSDS Number : 00000011714

Product Use Description : Solvent

Manufacturer : Honeywell
1953 South Harvey Street
Muskegon, MI 49442

Manufactured for : VWR International LLC
Radnor Corporate Center
Building One
Suite 200
100 Matsonford Road
Radnor PA 19087

For more information call : (Monday-Friday, 8:00am-5:00pm)
1-800-932-5000

In case of emergency call : (24 hours/day, 7 days/week)
1-800-424-9300 (USA Only)
For Transportation Emergencies:
1-800-424-9300 (CHEMTREC - Domestic)
1-613-966-6666 (CANUTEC - Canada)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid, clear

Color : colourless

Odor : sweet mild

Hazard Summary : This product is not flammable at ambient temperatures and atmospheric pressure. May be harmful if swallowed. May be harmful if absorbed through skin. May be fatal if inhaled in large quantities. Irritating to eyes, respiratory system and skin. The product may be absorbed through the skin. Repeated exposure may cause skin dryness or cracking. Potential cancer hazard.



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Confirmed animal carcinogen with unknown relevance to humans.

Potential Health Effects

- Skin** : Irritating to skin.
 May cause systemic poisoning with symptoms paralleling those of inhalation.
 May cause burns or external ulcers.
 Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.
- Eyes** : Irritating to eyes.
 Causes itching, burning, redness and tearing.
 May cause corneal injury.
- Ingestion** : May be harmful if swallowed.
 May cause irritation of the gastrointestinal tract.
- Inhalation** : Causes respiratory tract irritation.
 Causes headache, drowsiness or other effects to the central nervous system.
 Vapours may cause drowsiness and dizziness.
 Inhalation of high vapour concentrations can cause CNS-depression and narcosis.
 High concentration of vapours may induce unconsciousness.
 Repeated or prolonged exposure to the substance can produce kidney damage.
 Exposure to high concentrations can lead to increased carboxyhemoglobin levels in the blood. Carboxyhemoglobin can lead to central nervous system depression, respiratory failure and death by decreasing the oxygen carrying capacity of blood.
- Chronic Exposure** : Repeated or prolonged exposure to the substance can produce kidney damage.
 Repeated or prolonged exposure to the substance can produce liver damage.
 Repeated and prolonged exposure to solvents may cause brain and nervous system damage.
 Chronic exposure may cause headache, confusion, tremors, memory loss, slurred speech and anorexia.
 Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.
 Exposure to high concentrations can lead to increased carboxyhemoglobin levels in the blood. Carboxyhemoglobin can lead to central nervous system depression, respiratory



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failure and death by decreasing the oxygen carrying capacity of blood.
 Potential cancer hazard.
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Aggravated Medical Condition : Respiratory disorders
 Eye disorders
 Blood disorders
 Kidney disorders
 Liver disorders
 Neurological disorders
 Skin disorders
 Heart disease

Target Organs : Eyes
 Skin
 Cardiovascular system
 Central nervous system
 Heart
 Liver
 Kidney

Carcinogenicity

NTP: Dichloromethane 75-09-2
 Reasonably Anticipated to be a Human Carcinogen.

IARC: Dichloromethane 75-09-2
 Group 2B: Possibly carcinogenic to humans

OSHA: Dichloromethane 75-09-2
 Potential cancer hazard.

ACGIH: Dichloromethane 75-09-2
 A3: Confirmed animal carcinogen

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : CH₂Cl₂
 Chemical nature : Substance

Chemical Name	CAS-No.	Concentration
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Dichloromethane	75-09-2	100.00%

SECTION 4. FIRST AID MEASURES

- Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician.
- Ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician.

Notes to physician

- Treatment : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Dry chemical
Carbon dioxide (CO₂)
Foam
Cool closed containers exposed to fire with water spray.
- Specific hazards during firefighting : This product is not flammable at ambient temperatures and atmospheric pressure.
Exposure to decomposition products may be a hazard to health.
In case of fire hazardous decomposition products may be produced such as:
Phosgene
Chlorine (Cl₂)
Carbon monoxide
Carbon dioxide (CO₂)
Gaseous hydrogen chloride (HCl).
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Wear personal protective equipment.
Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Isolate the affected area. Confine entry into the affected area to those persons properly protected (see Section 8 of MSDS).
Ensure adequate ventilation.
Avoid accumulation of vapours in low areas.
Remove all sources of ignition.
Do not swallow.
Avoid breathing vapors, mist or gas.
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
Do not let product enter drains.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Do not allow run-off from fire fighting to enter drains or water courses.
- Methods for cleaning up : Ventilate the area.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Shovel into suitable container for disposal.
Dispose of absorbed material in accordance with the regulations.

SECTION 7. HANDLING AND STORAGE**Handling**

- Handling : Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
Do not smoke.
Do not swallow.
Avoid breathing vapors, mist or gas.
Avoid contact with skin, eyes and clothing.
- Advice on protection against fire and explosion : The product is not flammable.
Normal measures for preventive fire protection.
Keep product and empty container away from heat and sources



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of ignition.
 Fire or intense heat may cause violent rupture of packages.
 Container hazardous when empty.

Storage

Requirements for storage areas and containers : Protect from physical damage.
 Keep containers tightly closed in a dry, cool and well-ventilated place.
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 Keep away from heat and sources of ignition.
 Keep away from direct sunlight.
 Store away from incompatible substances.
 Container hazardous when empty.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
- Engineering measures : Use with local exhaust ventilation.
 Prevent vapor buildup by providing adequate ventilation during and after use.
- Eye protection : Do not wear contact lenses.
 Wear as appropriate:
 Safety glasses with side-shields
 If splashes are likely to occur, wear:
 Goggles or face shield, giving complete protection to eyes
- Hand protection : Solvent-resistant gloves
 Gloves must be inspected prior to use.
 Replace when worn.
- Skin and body protection : Wear as appropriate:
 Solvent-resistant apron
 Solvent-resistant gloves
 If splashes are likely to occur, wear:
 Protective suit
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
 Wear a positive-pressure supplied-air respirator.
 For rescue and maintenance work in storage tanks use



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Hygiene measures : self-contained breathing apparatus.
 Use NIOSH approved respiratory protection.

: When using, do not eat, drink or smoke.
 Wash hands before breaks and immediately after handling the product.
 Keep working clothes separately.
 Remove and wash contaminated clothing before re-use.
 Do not swallow.
 Avoid breathing vapors, mist or gas.
 Avoid contact with skin, eyes and clothing.
 This material has an established AIHA ERPG exposure limit.
 The current list of ERPG exposure limits can be found at
http://www.aiha.org/insideaiha/GuidelineDevelopment/ERPG/Documnts/2011erpgweelhandbook_table-only.pdf.

Exposure Guidelines–

Components	CAS-No	Value	Control parameters	Update	Basis
Dichloromethane	75-09-2	TWA : time weighted average	(50 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values

		REF : Reference:		02 2006	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
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		SKIN_DES : Skin designation:	Can be absorbed through the skin.	02 2006	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
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		STEL : Short term exposure limit	(125 ppm)	02 2006	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
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		OSHA_ACT : OSHA Action level:	(12.5 ppm)	02 2006	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
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		TWA : time weighted average	(25 ppm)	02 2006	OSHASP:US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid, clear
Colour	: colourless
Odour	: sweet mild
pH	: Note: not applicable
Melting point/freezing point	: -95 °C
Boiling point/boiling range	: 40 °C
Flash point	: Note: does not flash
Evaporation rate	: 0.7 Method: Compared to Ether (anhydrous).
Lower explosion limit	: 12 %(V)
Upper explosion limit	: 19 %(V)
Vapour pressure	: 466.63 hPa at 20 °C(68 °F)
Vapour density	: 2.9 Note: (Air = 1.0)
Density	: 1.33 g/cm ³
Water solubility	: 13.2 g/l at 25 °C
Ignition temperature	: 556 °C

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Molecular Weight : 84.94 g/mol

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Heat, flames and sparks.
Protect from extreme heat and cold.
Keep away from direct sunlight.

Materials to avoid : Oxidizing agents
Strong acids and strong bases
Metals
Aluminium
Lithium
Magnesium
Sodium
May attack many plastics, rubbers and coatings.

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:
Phosgene
Chlorine (Cl₂)
Carbon monoxide
Carbon dioxide (CO₂)
Gaseous hydrogen chloride (HCl).

Hazardous reactions : Hazardous polymerisation does not occur.
Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD₅₀: 1,600 mg/kg
Species: rat

Acute inhalation toxicity : LC₅₀: 14400 ppm
Exposure time: 7 h
Species: mouse

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Acute dermal toxicity	: LD50: > 2,000 mg/kg Species: rat
Skin irritation	: Species: rabbit Result: Moderate skin irritation
Eye irritation	: Species: rabbit Result: Moderate eye irritation
Dichloromethane	: Test Method: Ames test Result: positive
	: Test Method: In vitro gene mutation study in mammalian cells Cell type: Chinese Hamster Ovary Cells Result: positive
	: Test Method: Unscheduled DNA synthesis Result: positive Note: Liver cells mouse
Further information	: Note: Confirmed animal carcinogen with unknown relevance to humans.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish	: static test LC50: 310 mg/l Exposure time: 96 h Species: Pimephales promelas (fathead minnow)
	: flow-through test LC50: 193 mg/l Exposure time: 96 h Species: Pimephales promelas (fathead minnow)
	: flow-through test LC50: 10.95 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout)


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: static test
 LC50: 220 mg/l
 Exposure time: 96 h
 Species: Lepomis macrochirus (Bluegill sunfish)

Toxicity to daphnia and other aquatic invertebrates. : static test
 EC50: 140 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)

Toxicity to bacteria : EC50: 1,000 mg/l
 Exposure time: 15 min
 Species: Photobacterium phosphoreum

Further information on ecology
SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT UN/ID No. : UN 1593
 Proper shipping name : DICHLOROMETHANE
 Class : 6.1
 Packing group : III
 Hazard Labels : 6.1

IATA UN/ID No. : UN 1593
 Description of the goods : DICHLOROMETHANE
 Class : 6.1
 Packaging group : III
 Hazard Labels : 6.1
 Packing instruction (cargo aircraft) : 663
 Packing instruction (passenger aircraft) : 655
 Packing instruction (passenger aircraft) : Y642


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IMDG	UN/ID No.	:	UN 1593
	Description of the goods	:	DICHLOROMETHANE
	Class	:	6.1
	Packaging group	:	III
	Hazard Labels	:	6.1
	EmS Number	:	F-A
	Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION
Inventories

- US. Toxic Substances Control Act : On TSCA Inventory
- Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory
- Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL list.
- Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory
- Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory
- Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act : On the inventory, or in compliance with the inventory
- China. Inventory of Existing Chemical Substances : On the inventory, or in compliance with the inventory
- New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

National regulatory information

SARA 302 Components : SARA 302: No chemicals in this material are subject to the



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reporting requirements of SARA Title III, Section 302.

- SARA 313 Components** : The following components are subject to reporting levels established by SARA Title III, Section 313:
: Dichloromethane 75-09-2
- SARA 311/312 Hazards** : Acute Health Hazard
Chronic Health Hazard
- CERCLA Reportable Quantity** : 1000 lbs
- California Prop. 65** : WARNING! This product contains a chemical known to the State of California to cause cancer.
Dichloromethane 75-09-2

- Massachusetts RTK** : Dichloromethane 75-09-2
- New Jersey RTK** : Dichloromethane 75-09-2
- Pennsylvania RTK** : Dichloromethane 75-09-2

WHMIS Classification : D1B: Toxic Material Causing Immediate and Serious Toxic Effects
D2A: Very Toxic Material Causing Other Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 2*	2
Flammability	: 1	1
Physical Hazard	: 0	
Instability	:	0

* - Chronic health hazard



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Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 06/13/2012

Prepared by: Honeywell Performance Materials and Technologies Product Stewardship Group