



HazTech Systems, Inc.

SAFETY DATA SHEET

Revision number: 2
Revision date: 05/20/2015

1. IDENTIFICATION

Product name: Dithizone in Methylene chloride
Product code: RE2312
Synonyms: DCM, Methylene chloride, Diphenylthiocarbazono
CAS: Mixture 75-09-2/60-10-6
RTECS # PA8050000/LQ9450000
CI#: Not available
Recommended use: Laboratory chemicals, Manufacture of substances
Uses advised against: No information available

Company:

HazTech Systems, Inc.
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Chemical Emergencies:

HazTech Systems, Inc. (8:00am - 5:00pm) PST
1-800-543-5487
Transportation Emergencies:
Chemtrec 24-Hour
1-800-424-9300 (U.S.A.)
1-703-527-3887 (International)

2. HAZARD(S) IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Carcinogenicity (Category 2), H351

Specific target organ toxicity - single exposure (Category 3), Respiratory system, Central nervous system, H335, H336

Specific target organ toxicity - repeated exposure, Oral (Category 2), Liver, Blood, H373

Specific target organ toxicity - repeated exposure, Inhalation (Category 2), Central nervous system, H373

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

H336

May cause drowsiness or dizziness.

H351

Suspected of causing cancer.

H373

May cause damage to organs (Liver, Blood) through prolonged or repeated exposure if swallowed.

H373

May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

2. HAZARDS IDENTIFICATION

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well -ventilated area.
P280	Wear eye protection/ face protection.
P280	Wear protective gloves.
P281	Use personal protective equipment as required.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P403 + P233	Store in a well -ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS- none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances		Substances	
Synonyms	: Methylene chloride DCM	Synonyms	: Diphenylthiocarbazone
Formula	: CH ₂ Cl ₂	Formula	: C ₁₃ H ₁₂ N ₄ S
Molecular weight	: 84.93 g/mol	Molecular Weight	: 256.33 g/mol
CAS -No.	: 75 -09 -2	CAS -No.	: 60 -10 -6
EC-No.	: 200 -838 -9	EC-No.	: 200 -454 -1
Index -No.	: 602 -004 -00 -3		
Registration number	: 01 -2119480404 -41 -XXXX		

Hazardous Components

Component	Classification	Concentration
Methylene chloride		
	Skin Irrit. 2; Eye Irrit. 2A; Carc. 2; STOT SE 3; STOT RE 2; H315, H319, H335, H336, H351, H373, H373	<= 50%
1,5 -Diphenyl -3-thiocarbazone		
	Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3; H315, H319, H335	-

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

Description of first aid measures

General advice

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

4. FIRST AID MEASURES

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

No data available

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Heat sensitive. Store under inert gas.

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components with workplace control parameters

Component	CAS -No.	Value	Control parameters	Basis
	Remarks	Potential Occupational Carcinogen See Appendix A		
Methylene chloride	75-09-2	TWA	50.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Carboxyhemoglobinemia Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans		
		TWA	50 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Carboxyhemoglobinemia Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans		

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

		Substance listed; for more information see OSHA document 1910.1052		
		Substance listed; for more information see OSHA document 1910.1052		
		See Table Z -2		
		PEL	25.000000 ppm	OSHA Specifically Regulated Chemicals/Carcinogens
		1910.1052 This section applies to all occupational exposures to methylene chloride (MC), Chemical Abstracts Service Registry Number 75-09-2, in general industry, construction and shipyard employment. Methylene chloride (MC) means an organic compound with chemical formula, CH ₂ Cl ₂ . Its Chemical Abstracts Service Registry Number is 75-09-2. Its molecular weight is 84.9 g/mole OSHA specifically regulated carcinogen		
		STEL	125.000000 ppm	OSHA Specifically Regulated Chemicals/Carcinogens
		1910.1052 This section applies to all occupational exposures to methylene chloride (MC), Chemical Abstracts Service Registry Number 75-09-2 in general industry, construction and shipyard employment. Methylene chloride (MC) means an organic compound with chemical formula, CH ₂ Cl ₂ . Its Chemical Abstracts Service Registry Number is 75-09-2. Its molecular weight is 84.9 g/mole OSHA specifically regulated carcinogen		

Biological occupational exposure limits

Component	CAS -No.	Parameters	Value	Biological specimen	Basis
Methylene chloride	75-09-2	Dichloromethane	0.3000 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift (As soon as possible after exposure ceases)			

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material : Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material : Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time : 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

a) Appearance	Form : liquid Colour : brown
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range : -97 °C (-143 °F)
f) Initial boiling point and boiling range	39.8 - 40 °C (103.6 - 104 °F)
g) Flash point	No data available
h) Evaporation rate	0.71
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit : 19 %(V) Lower explosion limit : 12 %(V)
k) Vapour pressure	470.9 hPa (353.2 mmHg) at 20.0 °C (68.0 °F)
l) Vapour density	2.93 - (Air = 1.0)
m) Relative density	1.325 g/mL at 25 °C (77 °F)
n) Water solubility	slightly soluble
o) Partition coefficient: n - octanol/water	log Pow : 1.25
p) Auto-ignition temperature	556.1 °C (1,033.0 °F) 662.0 °C (1,223.6 °F)
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

Other safety information

Relative vapour density 2.93 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Contains the following stabiliser(s):

2-Methyl-2-butene (>0.005 - <0.015 %)

Possibility of hazardous reactions

No data available

Conditions to avoid

Heat, flames and sparks. Exposure to sunlight.

Incompatible materials

Alkali metals, Aluminum, Strong oxidizing agents, Bases, Amines, Magnesium, Strong acids and strong bases, Vinyl compounds

Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - > 2,000 mg/kg
LC50 Inhalation - Rat - 52,000 mg/m³
LD50 Dermal - Rat - > 2,000 mg/kg
(OECD Test Guideline 402)

No data available

Skin corrosion/irritation

Skin - Rabbit
Result : Irritating to skin. - 24 h
(Draize Test)

Serious eye damage/eye irritation

Eyes - Rabbit
Result : Irritating to eyes. - 24 h
(Draize Test)

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

Rat
DNA damage

Carcinogenicity

Carcinogenicity - Rat - Inhalation
Tumorigenic: Carcinogenic by RTECS criteria. Endocrine: Tumors.
Limited evidence of carcinogenicity in animal studies
Suspected human carcinogens

IARC: - Group 2B: Possibly carcinogenic to humans (Methylene chloride)

NTP: Reasonably anticipated to be a human carcinogen (Methylene chloride)

OSHA: OSHA specifically regulated carcinogen (Methylene chloride)

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.
May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

Inhalation - May cause damage to organs through prolonged or repeated exposure. - Central nervous system
Oral - May cause damage to organs through prolonged or repeated exposure. - Liver, Blood

Aspiration hazard

No data available

Additional Information

RTECS : PA8050000 (methylene chloride) LQ9450000 (Dithizone)
Dichloromethane is metabolized in the body producing carbon monoxide which increases and sustains carboxyhemoglobin levels in the blood, reducing the oxygen-carrying capacity of the blood., Acts as a simple asphyxiant by displacing air., anesthetic effects, Difficulty in breathing, Headache, Dizziness, Prolonged or repeated contact with skin may cause:, defatting, Dermatitis, Contact with eyes can cause:, Redness, Blurred vision, Provokes tears., Effects due to ingestion may include:, Gastrointestinal discomfort, Central nervous system depression, Paresthesia., Drowsiness, Convulsions, Conjunctivitis., Pulmonary edema. Effects may be delayed., Irregular breathing., Stomach/intestinal disorders, Nausea, Vomiting, Increased liver enzymes., Weakness, Heavy or prolonged skin exposure may result in the absorption of harmful amounts of material., Abdominal pain
Stomach - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow)	- 193.00 mg/l	- 96 h
	NOEC - Cyprinodon variegatus (sheepshead minnow)	- 130 mg/l	- 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea)	- 1,682.00 mg/l	- 48 h

Persistence and degradability

Biodegradability Result : < 26 % - Not readily biodegradable.
(OECD Test Guideline 301C)

12. ECOLOGICAL INFORMATION

Bioaccumulative potential

Does not bioaccumulate.

Mobility in soil

No data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 1593 Class : 6.1 Packing group : III

Proper shipping name : Dichloromethane

Reportable Quantity (RQ): 1000 lbs

Poison Inhalation Hazard : No

IMDG

UN number : 1593 Class : 6.1 Packing group : III EMS-No: F-A , S-A

Proper shipping name : DICHLOROMETHANE

IATA

UN number: 1593 Class : 6.1 Packing group : III

Proper shipping name : Dichloromethane

15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the 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:

	CAS -No.	Revision Date
Methylene chloride	75-09-2	2007-07-01

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS -No.	Revision Date
Methylene chloride	75-09-2	2007-07-01

Pennsylvania Right To Know Components

	CAS -No.	Revision Date
Methylene chloride	75-09-2	2007-07-01

New Jersey Right To Know Components

	CAS -No.	Revision Date
Methylene chloride	75-09-2	2007-07-01

California Prop. 65 Components

	CAS -No.	Revision Date
WARNING! This product contains a chemical known to the State of California to cause cancer.	75-09-2	2007-09-28

Methylene chloride

12. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Carc.	Carcinogenicity
Eye Irrit.	Eye irritation
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

HMIS Rating

Health hazard :	2
Chronic Health Hazard :	*
Flammability :	0
Physical Hazard	0

NFPA Rating

Health hazard :	2
Fire Hazard :	0
Reactivity Hazard :	0

Revision Date: 05/20/2015

Prepared by: HazTech Systems, Inc.

This information is based on HazTech Systems, Inc.'s, current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product