

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name	DICHLOROMETHANE
CAS-No.	75-09-2
Product code	AH1042A, AH1043A, AR1040A, BP1040A, CG1040A, EP1040A, GP1040A, IR1040A, LC1040A, LC1041A, PC1040A, RP1040A, XP1040A, XP1323A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Chemical for analysis and production.
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1.3 Details of the supplier of the safety data sheet

Company	RCI LABSCAN LIMITED. 24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand
Telephone number	(662) 613-7911-4
Fax number	(662) 613-7915

1.4 Emergency Telephone Number

Emergency phone	(662) 613-7911-4
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Skin irritation (Category 2), H315
 Eye irritation (Category 2), H319
 Carcinogenicity (Category 2), H351
 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
 Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
 Specific target organ toxicity - repeated exposure (Category 2), Liver, Blood, Central nervous system, H373
 For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

R40
R36/37/38, R67

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

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, Central nervous system) through prolonged or repeated exposure.

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 vapors.
P261	Avoid breathing vapours.
P264	Wash hand thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.
P281	Use personal protective equipment as required.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
P312	Call a POISON CENTER or doctor/physical if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
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.

2.3 Other hazards None

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms Methanedichloride, Methylene bichloride, Methylene chloride, Methylene dichloride.

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
75-09-2	200-838-9	602-004-00-3	CH ₂ Cl ₂	84.93 g/mol	>99.8

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Concentration	Classification
Dichloromethane		
CAS-No 75-09-2 EC-No 200-838-9 EC-Index-No 602-004-00-3	>99.8 %	Skin irritation (Category 2), H315 Eye irritation (Category 2), H319 Carcinogenicity (Category 2), H351 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335 Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336 Specific target organ toxicity - repeated exposure (Category 2), Liver, Blood, Central nervous system, H373

Hazardous ingredients according to Directive 1999/45/EC

Component	Concentration	Classification
Dichloromethane		
CAS-No 75-09-2 EC-No 200-838-9 EC-Index-No 602-004-00-3	>99.8 %	R40 R36/37/38, R67

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

3.2 Stabilized

Amylene

Synonyms 2-Methyl-2-butene, Trimethylethylene

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
513-35-9	208-156-3	-	C ₅ H ₁₀	70.14 g/mol	<0.005

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Concentration	Classification
Amylene		
CAS-No 513-35-9 EC-No 208-156-3 EC-Index-No -	<0.005%	Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 4), H302 Skin irritation (Category 2), H315 Germ cell mutagenicity (Category 2), H341 Aspiration hazard (Category 1), H304 Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336 Hazardous to the aquatic environment (Chronic Category 2), H411

Hazardous ingredients according to Directive 1999/45/EC

Component	Concentration	Classification
Amylene		
CAS-No 513-35-9 EC-No 208-156-3 EC-Index-No -	<0.005%	F, Highly flammable, R11 Xn, Harmful, R22 R38 N, Dangerous for the environment, R51/53 R65, R67, R68

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water. If signs of poisoning appear, treat as for inhalation. Obtain medical attention. Wash contaminated clothing before reuse.
Eye contact	If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. Do not induce vomiting. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus. Obtain medical attention. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and section 11

4.3 Indication of any immediate medical attention and special treatment needed

Activate charcoal (20 – 40 g in 10% slurry). Risk of aspiration. Immediately call in physician.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

In adaption to materials stored in the immediate neighborhood.

5.2 Special hazards arising from the substance or mixture

Non-combustible liquid. Vapors heavier than air. Ambient fire may liberate hazardous vapors. The following may develop in event of fire: Hydrochloric acid, phosgene.

5.3 Advice for firefighters

Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin. Keep a safety distance and wear suitable protective clothing.

5.4 Further information

Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or ground water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Contain or absorb leaking liquid with sand or earth, consults an expert. Prevent liquid entering sewers, basements and workpits. If substance has entered a water course or sewer or contaminated soil, advise police.

6.3 Methods and materials for containment and cleaning up

Spillage: May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silica gel). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere. Transfer to covered steel drums. Dispose of promptly.

6.4 Reference to other sections

For disposal see **Section 13**.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep container tightly closed. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not empty into drains.

7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed at room temperature in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep out of direct sunlight and away from incompatible materials. Store in original container. Electrical equipment should be protected to the appropriate standard.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

Application Area	Health Effects	Exposure	Value
Worker	Acute Systemic effects	Inhalation	706 mg/m ³
Worker	Long-term Systemic effects	Inhalation	353 mg/m ³
Worker	Long-term Systemic effects	Skin contact	4750 mg/kg Body weight
Consumer	Acute Systemic effects	Inhalation	353 mg/m ³
Consumer	Long-term Systemic effects	Ingestion	0.06 mg/kg Body weight
Consumer	Long-term Systemic effects	Inhalation	88.3 mg/m ³

Predicted No Effect Concentration (PNEC)

Compartment	Value
Aquatic intermittent release	0.27 mg/l
Fresh water	0.54 mg/l
Fresh water sediment	4.47 mg/kg
Marine water	0.194 mg/l
Sewage treatment plant	26 mg/l
Soil	0.583 mg/kg

8.2 Exposure controls

Appropriate engineering controls

The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

Individual protection measures (Personal protective equipment, PPE)

Eye/face protection

Goggles giving complete protection to eyes.

Skin protection

Chemical resistant apron, heavy duty work shoes.

Handle with gloves

- Splash contact wears gloves from viton material.

The select protective gloves have to satisfy the specifications of EU Directive 89/686 EEC and standard EN 374 derived from it.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Required when vapor/aerosols are generated filter AX (EN 371).

Environmental exposure controls

Prevent liquid entering sewers, basements and workpits.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Form	Liquid
: Color	Colorless
Odour	Sweetish
Odour Threshold	Not Available

pH	Neutral at 20°C
Melting point/range	-95 °C
Boiling point/range	40 °C
Flash point	Does not flash
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	13 % (V)
upper	22 % (V)
Vapor Pressure	475 hPa at 20°C
Relative Vapor Density	2.9
Density	1.330 g/ml at 20°C
Water solubility	20 g/l at 20°C
Partition coefficient (n-octanol/water)	log Pow: 1.25
Auto-Ignition temperature	605 °C
Decomposition Temperature	Not Available
Viscosity	0.43 mPa.s at 20°C
Explosive properties	Not Explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

SECTION 10: Stability and reactivity

10.1 Reactivity

Heat-sensitive, light sensitive/decomposition; unsuitable working materials: various plastic, rubber, light metals, metals, steel. Explosible with air in a vaporous/gaseous state.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Risk of explosion in contact with alkali metals, aluminium (powder), nitric oxides, nitric acid, aluminium chloride, 1,2-diaminoethane, sodium azide, perchloric acid, liquid oxygen.

The substance can react dangerously with alkali/alkaline earth metals, potassium-tert.-butylate, metal powders, sodium amide, heat, pressure.

10.4 Conditions to avoid

Heat and sunlight.

10.5 Incompatible materials

Alkali metals, alkaline earth metals, metals in powder form, nitrogen oxides, alcoholates, alkali amides, perchloric acid, nitric acid, nonmetallic oxides, oxygen, aluminium, sodium azide.

10.6 Hazardous decomposition products

Hydrochloric acid, phosgene, chlorine, Carbon monoxides, Carbon dioxides (Hazardous decomposition products from under fire condition).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD₅₀ (oral, rat): 1600 mg/kg

LC₅₀ (inhalation, rat): > 88 mg/l/30 min

LD_{L0} (oral, human): 357 mg/kg

Acute oral toxicity

Absorption

Symptoms: nausea and vomiting.

Acute inhalation toxicity

Symptoms: mucosal irritations

Skin corrosion/irritation

Slight irritations, Degreasing effect on the skin, possibly followed by secondary inflammation.

Serious eye damage/eye irritation

Slight irritations. Risk of corneal clouding.

Respiratory or skin sensitization

Not Available

Germ cell mutagenicity

Bacterial mutagenicity; Ames test is positive.

Mutagenicity (mammal, cell test): micronucleus negative (in vivo).

Carcinogenicity

The carcinogenic potential requires further clarification but, owing possible carcinogenic effects for man.

Reproductive toxicity

No impairment of reproductive performance in animal experiments.

Teratogenicity

No teratogenic effect in animal experiments.

Specific target organ toxicity (STOT) - single exposure

May cause respiratory irritation.

May cause drowsiness or dizziness.

Specific target organ toxicity (STOT) - repeated exposure

May cause damage to organs through prolonged or repeated exposure (Inhalation) - Central nervous system

May cause damage to organs through prolonged or repeated exposure (Oral) - Liver, Blood

Aspiration hazard

Not Available

Further information

After accidental swallowing the substance may pose a risk of aspiration. Passage into the lung (vomiting) can result in a condition resembling pneumonia (chemical pneumonitis).

After absorption of large quantities: CNS disorders, drowsiness, dizziness, drop in blood pressure, cardiac dysrhythmia, respiratory paralysis, depressed respiration, inebriation, narcosis.

The following applies to aliphatic halogenated hydrocarbons in general: systemic effect: narcosis, cardiovascular disorders.

Toxic effect on liver and kidneys.

The product should be handled with the care usual when dealing with chemicals.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish

LC₅₀ P.promelas: 193 mg/l/96h

Toxicity to daphnia

EC₅₀ Daphnia magna: 1682 mg/l/48h

and other aquatic invertebrates

Toxicity to algae IC₅₀ Selenastrum capricornutum: >660 mg/l/96h
 Toxicity to bacteria EC₅₀ Photobacterium phosphoreum: 2.88 mg/l/15min microtox test.

12.2 Persistence and degradability

Biodegradability 5 - 26 % /28d. MITI test. Biologically not readily. After adaption biodegradable.

12.3 Bioaccumulative potential

Partition coefficient (n-octanol/water) log Pow: 1.25 (experimental).
 No appreciable bioaccumulation potential is to be expected (log Po/w 1-3)

12.4 Mobility in soil

Not Available

12.5 Other adverse effects

Distribution preferentially in air. Do not allow to enter waters, waste water or soil.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Contaminated packaging

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

SECTION 14: Transport information

Land Transport (ADR/RID)

UN Number	1593
UN proper shipping name	DICHLOROMETHANE
Transport hazard class(es)	6.1
Packaging group	III
Environmental hazards	No
Special precautions for user	Yes

Sea transport (IMDG)

UN Number	1593
UN proper shipping name	DICHLOROMETHANE
Transport hazard class(es)	6.1
Packaging group	III
Marine pollutant	No
Special precautions for user	Yes
EmS	F-A S-A

Air transport (IATA)

UN Number	1593
UN proper shipping name	DICHLOROMETHANE
Transport hazard class(es)	6.1
Packaging group	III

Environmental hazards	No
Special precautions for user	No

River transport (AND/ADNR)
(Not examined)

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Not Available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

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

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H373	May cause damage to organs (Liver, Blood, Central nervous system) through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Full text of R-phrases referred to under sections 2 and 3

F	Highly flammable
Xn	Harmful
N	Dangerous for the environment
R11	Highly flammable.
R22	Harmful if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.
R38	Irritating to skin.
R40	Limited evidence of a carcinogenic effect.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.
R68	Possible risk of irreversible effects.

Recommended restrictions

Take notice of labels and safety data sheets for the working.

Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.

Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.

Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany,
Source: IFA for Databases on hazardous substances (GESTIS).

Further information

Contact to RCI Labscan Limited.

Revision Date

01/03/2015

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 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.