

Methylene Chloride

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1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product form: Substance

Substance name: Methylene Chloride

Chemical name: Dichloromethane; methylene chloride

 IUPAC name:
 Dichloromethane

 EC Index-No.:
 602-004-00-3

 EC-No.:
 200-838-9

 CAS-No.:
 75-09-2

REACH registration No.: 01-2119480404-41-XXXX

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

Relevant identified uses:

Main use category: Industrial use

Use of the substance/mixture: Colouring agent, Foaming or blowing agent, anti-set off and adhesive agent, Heat transfer

agent, Chemical intermediate, Laboratory chemical, Solvent, Plating agent, Metal surface

treating agent, Processing aid.

Uses advised against:

Restrictions on use: Any other use not identified.

Company name: Nexchem Ltd

Unit 3 Barshaw Park

Leycroft Road Leicester LE4 1ET

Tel: 0116 2311130

24/7 Emergency Tel: 0800 246 1274

Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification according to Regulation (EC) No. 1272/2008 [CLP]:

Skin corrosion/irritation, Category 2 H315

Serious eye damage/eye irritation, Category 2 H319

Carcinogenicity, Category 2 H351

Specific target organ toxicity — Single exposure, Category 3, Narcosis H336

Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335

Specific target organ toxicity — Repeated exposure, Category 2 H373

Full text of H statements: See section 16. [cont...]

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Adverse physicochemical, human health and environmental effects:

Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. May cause drowsiness or dizziness. May cause respiratory irritation. Causes skin irritation. Causes serious eye irritation.

Label elements:

Labelling according to Regulation (EC) No. 1272/2008 [CLP]:

Hazard pictograms (CLP):



Signal word (CLP): Warning

Hazard statements (CLP): 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 (blood, liver) through prolonged or repeated exposure.

Precautionary statements (CLP): P202 - Do not handle until all safety precautions have been read and understood.

P261 - Avoid breathing vapours.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P304+P340 - IF INHALED: Remove person to fresh air and keep 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. P362+P364 - Take off contaminated clothing and wash it before reuse.

P405 - Store locked up.

P501 - Dispose of contents and container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation.

Extra phrases: Restricted to industrial use and to professionals approved in certain EU Member States —

verify where use is allowed.

Other hazards: No additional information available.

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Substance type: Mono-constituent

Name Product identifier % Classification according to

Regulation (EC) No. 1272/2008 [CLP]

Methylene Chloride (CAS-No.) 75-09-2 > 99 Skin Irrit. 2, H315

 (EC-No.) 200-838-9
 Eye Irrit. 2, H319

 (EC Index-No.) 602-004-00-3
 Carc. 2, H351

 (REACH-no) 01-2119480404-41-XXXX
 STOT SE 3, H336

STOT SE 3, H335 STOT RE 2, H373

Full text of H-statements: See section 16.

Mixtures: Not applicable

4. FIRST AID MEASURES

Description of first aid measures:

First-aid measures general: IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Get immediate medical

advice/attention.

First-aid measures after skin contact: Take off contaminated clothing. Wash skin with plenty of water. If skin irritation occurs: Get

medical advice/attention.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Call a poison centre or a doctor if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms/effects: May cause drowsiness or dizziness.

Symptoms/effects after inhalation: May cause headache, nausea and irritation of respiratory tract.

Symptoms/effects after skin contact: Causes skin irritation.

Symptoms/effects after eye contact: Eye irritation.

Symptoms/effects after ingestion: Ingestion may cause nausea and vomiting.

Indication of any immediate medical attention and special treatment needed: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media: Do not use a heavy water stream.

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Special hazards arising from the substance or mixture:

Explosion hazard: Vapours may form explosive mixture with air.

Hazardous decomposition products in case of fire: Toxic fumes may be released.

Advice for firefighters:

Firefighting instructions: Use water spray or fog for cooling exposed containers.

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing

apparatus. Complete protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Protective equipment: Wear recommended personal protective equipment.

Emergency procedures: Ventilate spillage area. Do not breathe vapours. Avoid contact with skin and eyes.

For emergency responders:

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Environmental precautions: Avoid release to the environment.

Methods and material for containment and cleaning up:

Methods for cleaning up: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public

waters.

Other information: Dispose of materials or solid residues at an authorized site.

Reference to other sections: For further information refer to section 13.

7. HANDLING AND STORAGE

Precautions for safe handling:

Precautions for safe handling: Obtain special instructions before use. Do not handle until all safety precautions have been

read and understood. Wear personal protective equipment. Do not breathe vapours. Use only

outdoors or in a well-ventilated area. Avoid contact with skin and eyes.

Hygiene measures: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Always wash hands after handling the product.

Conditions for safe storage, including any incompatibilities:

Storage conditions: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Storage area: Store away from heat.

Specific end use(s): No additional information available.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Methylene Chloride (75-09-2)

EU - Occupational Exposure Limits:

Local name: Methylene chloride; Dichloromethane

 IOELV TWA (mg/m³)
 353 mg/m³

 IOELV TWA (ppm)
 100 ppm

 IOELV STEL (mg/m³)
 706 mg/m³

 IOELV STEL (ppm)
 200 ppm

 Notes:
 Skin

Regulatory reference: COMMISSION DIRECTIVE (EU) 2017/164

EU - Biological limit values:

Local name: Methylene chloride

European BLV: 4 % Parameter: COHb - Medium: Blood

0.3 mg/l Parameter: methylene chloride - Medium: urine1 mg/l Parameter: methylene chloride - Medium: blood

Regulatory reference: SCOEL List of recommended health-based BLVs and BGVs

United Kingdom - Occupational Exposure Limits:

Local name: Dichloromethane

 WEL TWA (mg/m³)
 353 mg/m³

 WEL TWA (ppm)
 100 ppm

 WEL STEL (mg/m³)
 706 mg/m³

 WEL STEL [ppm]
 200 ppm

Remark (WEL): Sk (Can be absorbed through the skin. The assigned substances are those for which there are

concerns that dermal absorption will lead to systemic toxicity)

Regulatory reference: EH40/2005 (Fourth edition, 2020). HSE

Methylene Chloride (75-09-2)

United Kingdom - Biological limit values:

Local name: Dichloromethane

United Kingdom (BEI): 30 ppm Parameter: carbon monoxide - Medium: end-tidal breath - Sampling time: Post shift

Regulatory reference: EH40/2005 (Fourth edition, 2020). HSE

Methylene Chloride (75-09-2)

DNEL/DMEL (Workers): Acute - systemic effects, inhalation 706 mg/m³

Long-term - systemic effects, dermal 12 mg/kg bodyweight/day

Long-term - systemic effects, inhalation 353 mg/m³

DNEL/DMEL (General population): Acute - systemic effects, inhalation 353 mg/m³

Long-term - systemic effects, oral 0.06 mg/kg bodyweight/day

Long-term - systemic effects, inhalation 88.3 mg/m³

Long-term - systemic effects, dermal 5.82 mg/kg bodyweight/day

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PNEC (Water):

PNEC aqua (freshwater) 0.31 mg/l PNEC aqua (marine water) 0.031 mg/l PNEC aqua (intermittent, freshwater) 0.27 mg/l

PNEC (Sediment):

PNEC sediment (freshwater) 2.57 mg/kg dwt PNEC sediment (marine water) 0.26 mg/kg dwt

PNEC (Soil):

PNEC soil 0.33 mg/kg dwt

PNEC (STP):

PNEC sewage treatment plant 26 mg/l

Exposure controls:

Appropriate engineering controls: Ensure good ventilation of the workstation.

Personal protective equipment: Personal protective equipment for the body should be selected based on the task being

performed and the risks involved and should be approved by a specialist before handling this

product.

Eye protection: Safety glasses

Skin and body protection: Wear suitable protective clothing

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protective equipment symbol(s):











Environmental exposure controls: Avoid release to the environment.

Other information: Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: Liquid

Molecular mass: 84.933 g/mol Source: ECHA

Colour: Clear.

Odour: Characteristic. **Odour threshold:** ≈ 200 ppm

pH: No data available

Relative evaporation rate (butylacetate=1): 71 Source: HSDB

Melting point: -95 °C Atm. press.: 101,3 kPa Decomposition: 'no'

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Freezing point: No data available

Boiling point: 40 °C Atm. press.: 101,3 kPa Decomposition: 'no'

Flash point: No data available

Auto-ignition temperature: 605 °C Source: ECHA

Decomposition temperature: > 120 °C

Flammability (solid, gas): Not applicable

Vapour pressure: 58400 Pa Temp.: 25 °C Relative vapour density at 20 °C: 1.33 Source: ECHA

Relative density: 1.33 Type: 'relative density' Temp.: 20 °C **Density:** 1.33 g/cm³ Type: 'density' Temp.: 20 °C

Solubility: Soluble in organic solvents. Slightly soluble in: Water.

Water: 13200 mg/l 25°C Source: ECHA

Partition coefficient n-octanol/water (Log Pow): 1.25 Source: ECHA

Viscosity, kinematic: 0.316 mm²/s

Viscosity, dynamic: 0.42 mPa·s Temp.: 'other:298.15K' Parameter: 'dynamic viscosity (in mPa s)'

Explosive properties: No data available

Oxidising properties: No data available

Upper explosive limit (UEL): 12 – 25 % Source: ICSC

Other information: No additional information available

10. STABILITY AND REACTIVITY

Reactivity:The product is non-reactive under normal conditions of use, storage and transport.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: No dangerous reactions known under normal conditions of use.

Conditions to avoid: None under recommended storage and handling conditions (see section 7).

Incompatible materials: No additional information available.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not

be produced.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity (oral): Not classified.

Acute toxicity (dermal): Not classified.

Acute toxicity (inhalation): Not classified.

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Methylene Chloride (75-09-2)

LD50 oral rat: > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

LD50 dermal rat: > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye irritation.

Respiratory or skin sensitisation: Not classified.

Germ cell mutagenicity: Not classified.

Carcinogenicity: Suspected of causing cancer.

Methylene Chloride (75-09-2)

IARC group: 2A - Probably carcinogenic to humans.

Reproductive toxicity: Not classified.

STOT-single exposure: May cause drowsiness or dizziness. May cause respiratory irritation.

STOT-repeated exposure: May cause damage to organs (blood, liver) through prolonged or repeated exposure.

Methylene Chloride (75-09-2)

NOAEL (oral, rat, 90 days): 6 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity /

Carcinogenicity Studies).

Aspiration hazard: Not classified.

Methylene Chloride (75-09-2)

Viscosity, kinematic: 0.316 mm²/s

12. ECOLOGICAL INFORMATION

Toxicity:

Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term (acute): Not classified.

Hazardous to the aquatic environment, long-term (chronic): Not classified.

Not rapidly degradable.

LC50 fish 1: 193 mg/l Test organisms (species): Pimephales promelas.

NOEC chronic algae: 550 mg/l

Persistence and degradability: No additional information available.

Bioaccumulative potential: Partition coefficient n-octanol/water (Log Pow) 1.25 Source: ECHA

Mobility in soil: No additional information available.

Results of PBT and vPvB assessment: No additional information available.

Other adverse effects: No additional information available.

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13. DISPOSAL CONSIDERATIONS

Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations: Do not burn empty packaging. Do not cut using a blowtorch.

14. TRANSPORT INFORMATION

In accordance with ADR / RID / IMDG / IATA / ADN:

ADR	IMDG	IATA	ADN	RID
UN number:				
LIN 1593	UN 1593	UN 1593	LIN 1593	UN 1593

UN proper shipping name:

DICHLOROMETHANE DICHLOROMETHANE DICHLOROMETHANE DICHLOROMETHANE

Transport document description:

UN 1593 UN 1593 UN 1593 UN 1593 UN 1593 UN 1593
DICHLOROMETHANE, DICHLOROMETHANE, DICHLOROMETHANE, DICHLOROMETHANE,

6.1, III, (E) 6.1, III 6.1, III 6.1, III 6.1, III

Transport hazard class(es):











Packing group:

III III III III III

Environmental hazards:

Dangerous for the environment: No.

Dangerous for the environment: No.

Marine pollutant: No.

Dangerous for the environment: No.

Dangerous for the environment: No.

Dangerous for the environment: No.

No supplementary information available.

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Special precautions for user:

Overland transport:

Classification code (ADR): T1

Special provisions (ADR): 516

Limited quantities (ADR): 51

Excepted quantities (ADR): E1

Packing instructions (ADR): P001, IBC03, LP01, R001

Special packing provisions (ADR): B8 Mixed packing provisions (ADR): MP19

Portable tank and bulk container instructions (ADR): T7

Portable tank and bulk container special provisions (ADR): TP2

Tank code (ADR): L4BH

Tank special provisions (ADR): TU15, TE19

Vehicle for tank carriage: AT Transport category (ADR): 2

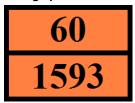
Special provisions for carriage - Packages (ADR): V12

Special provisions for carriage - Loading, unloading and handling (ADR): CV13, CV28

Special provisions for carriage - Operation (ADR): S9

Hazard identification number (Kemler No.): 60

Orange plates:



Tunnel restriction code (ADR): E
EAC code: 2Z

Transport by sea:

Limited quantities (IMDG): 5 L Excepted quantities (IMDG): E1

Packing instructions (IMDG): P001, LP01

IBC packing instructions (IMDG): IBC03
IBC special provisions (IMDG): B8
Tank instructions (IMDG): T7
Tank special provisions (IMDG): TP2
EmS-No. (Fire): F-A
EmS-No. (Spillage): S-A
Stowage category (IMDG): A

Segregation (IMDG): SGG10

Properties and observations (IMDG): Colourless, volatile liquid with heavy vapours. Boiling point: 40°C. When involved in a fire, evolves extremely toxic fumes (phosgene). Toxic if swallowed, by skin contact or by inhalation.

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Air transport:

PCA Excepted quantities (IATA): E1
PCA Limited quantities (IATA): Y642

PCA limited quantity max net quantity (IATA): 2L

PCA packing instructions (IATA): 655
PCA max net quantity (IATA): 60L
CAO packing instructions (IATA): 663
CAO max net quantity (IATA): 220L
ERG code (IATA): 6L

Inland waterway transport:

Classification code (ADN): T1

Special provisions (ADN): 516, 802
Limited quantities (ADN): 5 L

Excepted quantities (ADN): E1

Equipment required (ADN): PP, EP, TOX, A

Ventilation (ADN): VE02 Number of blue cones/lights (ADN): 0

Rail transport:

Classification code (RID): T1

Special provisions (RID): 516

Limited quantities (RID): 5L

Excepted quantities (RID): E1

Packing instructions (RID): P001, IBC03, LP01, R001

Special packing provisions (RID): B8

Mixed packing provisions (RID): MP19

Portable tank and bulk container instructions (RID): T7

Portable tank and bulk container special provisions (RID): TP2

Tank codes for RID tanks (RID): L4BH

Special provisions for RID tanks (RID): TU15

Transport category (RID): 2

Special provisions for carriage - Packages (RID): W12

Special provisions for carriage - Loading, unloading and handling (RID): CW13, CW28, CW31

Colis express (express parcels) (RID): CE8 Hazard identification number (RID): 60

Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.

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15. REGULATORY INFORMATION

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

EU-Regulations:

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

Reference code	Applicable on	Entry title or description	
3(b)	Methylene Chloride	oride Substances or mixtures fulfilling the criteria for any of the following hazar	
		classes or categories set out in Annex I to Regulation (EC) No 1272/2008:	
		Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility	
		or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	
59.	Methylene Chloride	Dichloromethane	

Methylene Chloride is not on the REACH Candidate List.

Methylene Chloride is not on the REACH Annex XIV List.

Methylene Chloride is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals. Methylene Chloride is not subject to Regulation (EU) No 2019/1021 of the European

Parliament and of the Council of 20 June 2019 on persistent organic pollutants

National regulations: Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List)

Listed on the Canadian NDSL (Non-Domestic Substances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on ELINCS (European List of Notified Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the United States TSCA (Toxic Substances Control Act) inventory

Chemical safety assessment: No chemical safety assessment has been carried out.

The regulatory information given above only indicates the principal regulations specifically

Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all

applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Note:

Abbreviations and acronyms:

ADN European Agreement concerning the International Carriage of Dangerous Goods by

Inland Waterways.

ADR European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE Acute Toxicity Estimate.

BLV Biological limit value.

CAS-No. Chemical Abstract Service number.

[cont...]

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CLP Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008.

DMEL Derived Minimal Effect level.

DNEL Derived-No Effect Level.

EC50 Median effective concentration. EC-No. European Community number.

EN European Standard.

IATA International Air Transport Association.

IMDG International Maritime Dangerous Goods.

LC50 Median lethal concentration.

LD50 Median lethal dose.

LOAEL Lowest Observed Adverse Effect Level.

NOAEC No-Observed Adverse Effect Concentration.

NOAEL No-Observed Adverse Effect Level.

NOEC No-Observed Effect Concentration.

OEL Occupational Exposure Limit.

PBT Persistent Bioaccumulative Toxic.

PNEC Predicted No-Effect Concentration.

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC)

No 1907/2006.

RID Regulations concerning the International Carriage of Dangerous Goods by Rail.

SDS Safety Data Sheet.

vPvB Very Persistent and Very Bioaccumulative.

WGK Water Hazard Class.

Full text of H- and EUH-statements:

Legal disclaimer:

Carc. 2: Carcinogenicity, Category 2.

Eye Irrit. 2: Serious eye damage/eye irritation, Category 2.

Skin Irrit. 2: Skin corrosion/irritation, Category 2.

STOT RE 2: Specific target organ toxicity — Repeated exposure, Category 2.

STOT SE 3: Specific target organ toxicity — Single exposure, Category 3, Narcosis.

STOT SE 3: Specific target organ toxicity — Single exposure, Category 3, Respiratory tract 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.

The information contained in this SDS does not constitute a risk assessment, and should not

replace the user's own assessment of risks as required by other health and safety legislation.

This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.