

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 02.09.2019

Version 15.9

SECTION 1. Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Catalogue No.	106044
Product name	Dichloromethane for liquid chromatography LiChrosolv®
REACH Registration Number	01-2119480404-41-XXXX
CAS-No.	75-09-2

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

Identified uses	Analytical and preparative chromatography In compliance with the conditions described in the annex to this safety data sheet.
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1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Responsible Department	LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number **Please contact the regional company representation in your country.****SECTION 2. Hazards identification****2.1 Classification of the substance or mixture**
Classification (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, Central nervous system, H336

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

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

Warning

Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.

Precautionary statements

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

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word

Warning

Hazard statements

H351 Suspected of causing cancer.

Precautionary statements

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Contains: Dichloromethane

Index-No. 602-004-00-3

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

3.1 Substance

Formula	CH ₂ Cl ₂	CH ₂ Cl ₂ (Hill)
Index-No.	602-004-00-3	

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EC-No. 200-838-9
Molar mass 84,93 g/mol

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

CAS-No.	Registration number	Classification
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Dichloromethane ($\geq 50\%$ - $\leq 100\%$)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

75-09-2	01-2119480404-41-XXXX	Skin irritation, Category 2, H315 Eye irritation, Category 2, H319 Carcinogenicity, Category 2, H351 Specific target organ toxicity - single exposure, Category 3, H336
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For the full text of the H-Statements mentioned in this Section, see Section 16.

3.2 Mixture

Not applicable

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air. Call in physician.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately. Subsequently administer: activated charcoal (20 - 40 g in 10% slurry).

4.2 Most important symptoms and effects, both acute and delayed

Dizziness, inebriation, Nausea, Vomiting, CNS disorders, Unconsciousness, Cough, depressed respiration, Shortness of breath, respiratory paralysis
Risk of corneal clouding.

The following applies to aliphatic halogenated hydrocarbons in general: systemic effect: narcosis, cardiovascular disorders. Toxic effect on liver, kidneys.
irritant effects, somnolence, Drowsiness

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

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Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.

Vapours are heavier than air and may spread along floors.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Hydrogen chloride gas, Phosgene

5.3 Advice for firefighters

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

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Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Protected from light.

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

Recommended storage temperature see product label.

7.3 Specific end use(s)

See exposure scenario in the Annex to this MSDS.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

Worker DNEL, acute	Systemic effects	inhalation	706 mg/m ³
Worker DNEL, longterm	Systemic effects	inhalation	353 mg/m ³
Worker DNEL, longterm	Systemic effects	dermal	4750 mg/kg Body weight
Consumer DNEL, longterm	Systemic effects	oral	0,06 mg/kg Body weight
Consumer DNEL, longterm	Systemic effects	dermal	2395 mg/kg Body weight
Consumer DNEL, longterm	Systemic effects	inhalation	88,3 mg/m ³
Consumer DNEL, acute	Systemic effects	inhalation	353 mg/m ³

Predicted No Effect Concentration (PNEC)

PNEC Fresh water	0,54 mg/l
PNEC Fresh water sediment	4,47 mg/kg
PNEC Marine water	0,194 mg/l
PNEC Marine sediment	1,61 mg/kg
PNEC Aquatic intermittent release	0,27 mg/l
PNEC Sewage treatment plant	26 mg/l
PNEC Soil	0,583 mg/kg

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

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Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

Hand protection

splash contact:

Glove material:	Viton (R)
Glove thickness:	0,70 mm
Break through time:	> 120 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 890 Vitoject® (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment

protective clothing

Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: Filter AX (EN 371)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Environmental exposure controls

Do not let product enter drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Colour	colourless
Odour	sweet
Odour Threshold	24,9 - 611,7 ppm

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pH	at 20 °C neutral
Melting point	-95 °C
Boiling point/boiling range	40 °C at 1.013 hPa
Flash point	does not flash
Evaporation rate	1,9
Flammability (solid, gas)	Not applicable
Lower explosion limit	13 %(V)
Upper explosion limit	22 %(V)
Vapour pressure	475 hPa at 20 °C
Relative vapour density	2,93
Density	1,33 g/cm ³ at 20 °C
Relative density	No information available.
Water solubility	20 g/l at 20 °C
Partition coefficient: n-octanol/water	log Pow: 1,25 (experimental) (Lit.) Bioaccumulation is not expected.
Auto-ignition temperature	No information available.
Decomposition temperature	> 120 °C Distillable in an undecomposed state at normal pressure.
Viscosity, dynamic	0,43 mPa.s at 20 °C
Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other data

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Ignition temperature 605 °C
DIN 51794

SECTION 10. Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

Sensitivity to light

The product is chemically stable under standard ambient conditions (room temperature) .

Stabilizer

2-methyl-2-butene

10.3 Possibility of hazardous reactions

Risk of explosion with:

Alkali metals, nitrogen oxides, nitrogen dioxide, Potassium, sodium azide, perchloric acid, Nitric acid, aluminium chloride, Amines, Oxygen, (as liquefied gas), powdered aluminium, sodium

aromatic hydrocarbons, with, powdered aluminium

Exothermic reaction with:

Alkaline earth metals, Powdered metals, amides, alcoholates, nonmetallic oxides, potassium tert-butanolate, sodium amide

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

rubber, various plastics, Light metals, Metals, Mild steel

10.6 Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

LD50 Rat: > 2.000 mg/kg

OECD Test Guideline 401

Symptoms: Nausea, Vomiting, Risk of aspiration upon vomiting., Aspiration may cause pulmonary oedema and pneumonitis.

Acute inhalation toxicity

LC50 Rat: 60,14 mg/l/17250 ppm; 4 h ; vapour
(Lit.)

Symptoms: Possible damages:, mucosal irritations

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Acute dermal toxicity

This information is not available.

Skin irritation

Rabbit

Result: Irritations

OECD Test Guideline 404

Causes skin irritation.

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Eye irritation

Rabbit

Result: Eye irritation

(ECHA)

Causes serious eye irritation.

Risk of corneal clouding.

Sensitisation

Local lymph node assay (LLNA) Mouse

Result: negative

Method: OECD Test Guideline 429

Germ cell mutagenicity

Genotoxicity in vivo

In vivo micronucleus test

Mouse

male and female

Oral

Bone marrow

Result: negative

Method: OECD Test Guideline 474

Genotoxicity in vitro

Mutagenicity (mammal cell test): chromosome aberration.

Result: positive

Method: OECD Test Guideline 473

Ames test

Salmonella typhimurium

Result: positive

Method: OECD Test Guideline 471

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

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CMR effects

Carcinogenicity:
Suspected of causing cancer.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.
Exposure routes: Inhalation
Target Organs: Central nervous system

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

Systemic effects:

After absorption of large quantities:

CNS disorders, Drowsiness, Dizziness, drop in blood pressure, Cardiac irregularities, depressed respiration, inebriation, Unconsciousness, narcosis, respiratory paralysis

Swallowing may result in damage to the following:

Liver, Kidney

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

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

SECTION 12. Ecological information

12.1 Toxicity

Toxicity to fish

flow-through test LC50 Pimephales promelas (fathead minnow): 193 mg/l; 96 h

Analytical monitoring: yes

US-EPA

Toxicity to daphnia and other aquatic invertebrates

static test EC50 Daphnia magna (Water flea): 27 mg/l; 48 h

US-EPA

Toxicity to algae

static test EbC50 Pseudokirchneriella subcapitata (green algae): > 662 mg/l; 96 h

OECD Test Guideline 201

Toxicity to bacteria

static test EC50 activated sludge: 2.590 mg/l; 40 min

Analytical monitoring: yes

OECD Test Guideline 209

Toxicity to fish (Chronic toxicity)

flow-through test NOEC Pimephales promelas (fathead minnow): 83 mg/l; 28 d

Analytical monitoring: yes

(ECHA)

12.2 Persistence and degradability

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Biodegradability

68 %; 28 d; aerobic
OECD Test Guideline 301D
Readily biodegradable

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water
log Pow: 1,25
(experimental)

(Lit.) Bioaccumulation is not expected.

12.4 Mobility in soil

Distribution among environmental compartments
Adsorption/Soil
log Koc: 1,00
(experimental)

Mobile in soils (Lit.)

12.5 Results of PBT and vPvB assessment

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Other adverse effects

Henry constant
329 Pa*m³/mol
Method: (experimental)
(Lit.) Distribution preferentially in air.

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	UN 1593
14.2 Proper shipping name	DICHLOROMETHANE
14.3 Class	6.1
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	E

Inland waterway transport (ADN)

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Not relevant

Air transport (IATA)

14.1 UN number UN 1593
14.2 Proper shipping name DICHLOROMETHANE
14.3 Class 6.1
14.4 Packing group III
14.5 Environmentally hazardous --
14.6 Special precautions for user no

Sea transport (IMDG)

14.1 UN number UN 1593
14.2 Proper shipping name DICHLOROMETHANE
14.3 Class 6.1
14.4 Packing group III
14.5 Environmentally hazardous --
14.6 Special precautions for user yes
EmS F-A S-A

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard SEVESO III
Legislation Not applicable

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

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Substances of very high concern (SVHC)

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of $\geq 0.1\%$ (w/w).

National legislation

Storage class 6.1 D

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.

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.

Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms



Signal word

Warning

Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.

Precautionary statements

Response

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

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Contains: Dichloromethane

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

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Product name Dichloromethane for liquid chromatography LiChrosolv®

EXPOSURE SCENARIO 1 (Industrial use)

1. Industrial use Analytical and preparative chromatography)

Sectors of end-use

- SU 3* Industrial uses: Uses of substances as such or in preparations at industrial sites
SU9 Manufacture of fine chemicals
SU 10 Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)

Chemical product category

- PC19* Intermediate
PC21 Laboratory chemicals

Process categories

- PROC1* Use in closed process, no likelihood of exposure
PROC2 Use in closed, continuous process with occasional controlled exposure
PROC3 Use in closed batch process (synthesis or formulation)
PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises
PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)
PROC8a Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
PROC8b Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC10 Roller application or brushing
PROC15 Use as laboratory reagent

Environmental Release Categories

- ERC2* Formulation of preparations
ERC4 Industrial use of processing aids in processes and products, not becoming part of articles
ERC6a Industrial use resulting in manufacture of another substance (use of intermediates)
-

2. Contributing scenarios: Operational conditions and risk management measures

2.1 Contributing scenario controlling environmental exposure for: ERC2

Amount used

Daily amount per site (Msafe) 1.898 kg

Environment factors not influenced by risk management

Dilution Factor (River) 10

Other given operational conditions affecting environmental exposure

Number of emission days per 300

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year
Emission or Release Factor: 0 %
Air
Emission or Release Factor: 1 %
Water
Emission or Release Factor: 0 %
Soil

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Municipal sewage treatment plant
Plant
Effectiveness (of a measure) 93,5 %

2.2 Contributing scenario controlling environmental exposure for: ERC4

Amount used

Daily amount per site (Msafe) 24.100 kg

Environment factors not influenced by risk management

Dilution Factor (River) 10

Other given operational conditions affecting environmental exposure

Number of emission days per year 100
Emission or Release Factor: 67 %
Air
Emission or Release Factor: 0,154 %
Water
Emission or Release Factor: 0 %
Soil

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Municipal sewage treatment plant
Plant
Effectiveness (of a measure) 93,5 %

2.3 Contributing scenario controlling environmental exposure for: ERC6a, SpERC ESVOc 2

Amount used

Daily amount per site (Msafe) 8.567 kg

Environment factors not influenced by risk management

Dilution Factor (River) 10

Other given operational conditions affecting environmental exposure

Number of emission days per year 300
Emission or Release Factor: 0,05 %
Air

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Emission or Release Factor: 1 %
Water
Emission or Release Factor: 0 %
Soil

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Municipal sewage treatment plant
Plant
Effectiveness (of a measure) 93,5 %

2.4 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC15

Product characteristics

Concentration of the Substance in Mixture/Article Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) High volatile liquid

Frequency and duration of use

Frequency of use 8 hours/day
Frequency of use 5 days/week

Other operational conditions affecting workers exposure

Outdoor / Indoor Indoor without local exhaust ventilation (LEV)

Organisational measures to prevent /limit releases, dispersion and exposure

Covers daily exposures up to 8 hours.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice Wear suitable gloves tested to EN374.

3. Exposure estimation and reference to its source

Environment

CS	Use descriptor	Msafe	Compartment	RCR	Exposure Assessment Method
2.1	ERC2	1898 kg/day	All compartments	< 1	EUSES
2.2	ERC4	24100 kg/day	All compartments	< 1	EUSES
2.3	ERC6a	8567 kg/day	All compartments	< 1	EUSES

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Workers

CS	Use descriptor	Exposure duration, route, effect	RCR	Exposure Assessment Method
2.4	PROC1	longterm, combined, systemic	< 1	ECETOC TRA
2.4	PROC2	longterm, combined, systemic	< 1	ECETOC TRA
2.4	PROC3	longterm, combined, systemic	< 1	ECETOC TRA
2.4	PROC4	longterm, combined, systemic	< 1	ECETOC TRA
2.4	PROC5	longterm, combined, systemic	< 1	ECETOC TRA
2.4	PROC8a	longterm, combined, systemic	< 1	ECETOC TRA
2.4	PROC8b	longterm, combined, systemic	< 1	ECETOC TRA
2.4	PROC9	longterm, combined, systemic	< 1	ECETOC TRA
2.4	PROC10	longterm, combined, systemic	< 1	ECETOC TRA
2.4	PROC15	longterm, combined, systemic	< 1	ECETOC TRA

The default parameters and -efficiencies of the applied exposure assessment model were used for the calculation (unless stated differently).

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).

For scaling of worker exposure assessments performed with ECETOC TRA, please consult the Merck tool ScIDeEx® at www.merckmillipore.com/scideex.

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EXPOSURE SCENARIO 2 (Professional use)

1. Professional use Analytical and preparative chromatography)

Sectors of end-use

SU 22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Chemical product category

PC21 Laboratory chemicals

Process categories

PROC15 Use as laboratory reagent

Environmental Release Categories

ERC2 Formulation of preparations

ERC6a Industrial use resulting in manufacture of another substance (use of intermediates)

2. Contributing scenarios: Operational conditions and risk management measures

2.1 Contributing scenario controlling environmental exposure for: ERC2

Amount used

Daily amount per site (Msafe) 1.898 kg

Environment factors not influenced by risk management

Dilution Factor (River) 10

Other given operational conditions affecting environmental exposure

Number of emission days per year 300

Emission or Release Factor: Air 0 %

Emission or Release Factor: Water 1 %

Emission or Release Factor: Soil 0 %

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant Municipal sewage treatment plant

Effectiveness (of a measure) 93,5 %

2.2 Contributing scenario controlling environmental exposure for: ERC6a, SpERC ESVOC 2

Amount used

Daily amount per site (Msafe) 8.567 kg

Environment factors not influenced by risk management

Dilution Factor (River) 10

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Other given operational conditions affecting environmental exposure

Number of emission days per year 300
Emission or Release Factor: Air 0,05 %
Emission or Release Factor: Water 1 %
Emission or Release Factor: Soil 0 %

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant Municipal sewage treatment plant
Effectiveness (of a measure) 93,5 %

2.3 Contributing scenario controlling worker exposure for: PROC15

Product characteristics

Concentration of the Substance in Mixture/Article Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) High volatile liquid

Frequency and duration of use

Frequency of use 8 hours/day
Frequency of use 5 days/week

Other operational conditions affecting workers exposure

Outdoor / Indoor Indoor without local exhaust ventilation (LEV)

Organisational measures to prevent /limit releases, dispersion and exposure

Covers daily exposures up to 8 hours.

Additional good practice advice beyond the REACH Chemical Safety Assessment

Additional good practice advice Wear suitable gloves tested to EN374.

3. Exposure estimation and reference to its source

Environment

CS	Use descriptor	Msafe	Compartment	RCR	Exposure Assessment Method
2.1	ERC2	1898 kg/day	All compartments	< 1	EUSES
2.2	ERC6a	8567 kg/day	All compartments	< 1	EUSES

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 106044
Product name Dichloromethane for liquid chromatography LiChrosolv®

Workers

CS	Use descriptor	Exposure duration, route, effect	RCR	Exposure Assessment Method
2.3	PROC15	longterm, combined, systemic	< 1	ECETOC TRA

The default parameters and -efficiencies of the applied exposure assessment model were used for the calculation (unless stated differently).

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).

For scaling of worker exposure assessments performed with ECETOC TRA, please consult the Merck tool ScIDeEx® at www.merckmillipore.com/scideex.

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