

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Revision Date 02.09.2019

Version 17.10

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

Catalogue No.	822271
Product name	Dichloromethane EMPLURA®
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	Chemical for synthesis 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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Product name

822271  
Dichloromethane EMPLURA®

## 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 <sub>2</sub> Cl <sub>2</sub>	CH <sub>2</sub> Cl <sub>2</sub> (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

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## 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.

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## 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.

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## 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.

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## 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.

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## **SECTION 8. Exposure controls/personal protection**

### **8.1 Control parameters**

#### **Derived No Effect Level (DNEL)**

Worker DNEL, acute	Systemic effects	inhalation	706 mg/m <sup>3</sup>
Worker DNEL, longterm	Systemic effects	inhalation	353 mg/m <sup>3</sup>
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 <sup>3</sup>
Consumer DNEL, acute	Systemic effects	inhalation	353 mg/m <sup>3</sup>

#### **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](http://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.

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## 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 <sup>3</sup> 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
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## 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.

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## 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.

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## **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\*m<sup>3</sup>/mol  
Method: (experimental)  
(Lit.) Distribution preferentially in air.

Discharge into the environment must be avoided.

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## **SECTION 13. Disposal considerations**

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## **SECTION 14. Transport information**

### **Land transport (ADR/RID)**

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

### **Inland waterway transport (ADN)**

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Not relevant

## Air transport (IATA)

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

## Sea transport (IMDG)

<b>14.1 UN number</b>	UN 1593
<b>14.2 Proper shipping name</b>	DICHLOROMETHANE
<b>14.3 Class</b>	6.1
<b>14.4 Packing group</b>	III
<b>14.5 Environmentally hazardous</b>	--
<b>14.6 Special precautions for user</b>	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.
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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.

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## 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](http://www.wikipedia.org).

## **Regional representation**

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

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*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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## EXPOSURE SCENARIO 1 (Industrial use)

### 1. Industrial use Chemical for synthesis)

#### Sectors of end-use

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

#### Chemical product category

<i>PC19</i>	Intermediate
<i>PC21</i>	Laboratory chemicals

#### Process categories

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

#### Environmental Release Categories

<i>ERC2</i>	Formulation of preparations
<i>ERC4</i>	Industrial use of processing aids in processes and products, not becoming part of articles
<i>ERC6a</i>	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
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##### 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	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 %

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## 2.2 Contributing scenario controlling environmental exposure for: ERC4

### Amount used

Daily amount per site (Msafe)	24.100 kg
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### 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	100
year	
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 %

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

### Amount used

Daily amount per site (Msafe)	8.567 kg
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### 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	300
year	
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](http://www.merckmillipore.com/scideex).

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 822271  
Product name Dichloromethane EMPLURA®

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## EXPOSURE SCENARIO 2 (Professional use)

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### 1. Professional use Chemical for synthesis)

#### 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)

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### 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: 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 %

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#### 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

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## Workers

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

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

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