

Trade name: Methanol, CH₃OH, technical, 99.85%**Current version :** 4.3.1, issued: 12.01.2022**Replaced version:** 4.3.0, issued: 10.10.2019**Region:** GB**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name****Methanol, CH₃OH, technical, 99.85%****MSK Code: 60003, 60021, 90011, 90042**Substance name methanol
REACH registration no. 01-2119433307-44-0036**Identification numbers**CAS no. 67-56-1
EC no. 200-659-6
Index no. 603-001-00-X**1.2 Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses of the substance or mixture**Industrial use
Use as an intermediate, process chemical
Formulation and (re)packing of substance and mixtures
Use as cleaning agent
Vitamin
Professional use
Use as a laboratory reagent**Uses advised against**

No data available.

Reference to relevant exposure scenarios

For an overview of the exact titles of the relevant exposure scenarios please refer to section 16 of this SDS.

1.3 Details of the supplier of the safety data sheet**Address**MSK a.d. Kikinda
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Advice on Safety Data Sheet

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For medical advice (in German and English):

+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification in accordance with Regulation (EC) No 1272/2008 (CLP)**Acute Tox. 3; H301
Acute Tox. 3; H311
Acute Tox. 3; H331
Flam. Liq. 2; H225
STOT SE 1; H370**Classification information**This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:
Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP
Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3 and 4 of Annex I to CLP.

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 4.3.1, issued: 12.01.2022

Replaced version: 4.3.0, issued: 10.10.2019

Region: GB

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)

Product identifier

67-56-1 (methanol)

Hazard pictograms



GHS02



GHS06



GHS08

Signal word

Danger

Hazard statement(s)

H225

Highly flammable liquid and vapour.

H301+H311+H331

Toxic if swallowed, in contact with skin or if inhaled

H370

Causes damage to organs.

Precautionary statement(s)

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310

IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P303+P361+P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304+P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311

IF exposed or concerned: Call a POISON CENTER/doctor.

P330

Rinse mouth.

P363

Wash contaminated clothing before reuse.

P403+P235

Store in a well-ventilated place. Keep cool.

P405

Store locked up.

P501

Dispose of contents/container to hazardous or special waste collection point.

2.3 Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterization

Substance name methanol

Identification numbers

CAS no. 67-56-1

EC no. 200-659-6

Index no. 603-001-00-X

Other information

Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
-	STOT SE 2; H371: C >= 3% STOT SE 1; H370: C >= 10%	-	-

Acute toxicity estimate (ATE) values

oral	dermal	inhalative
	300 mg/kg bodyweight	

3.2 Mixtures

Not applicable. The product is not a mixture.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Remove contaminated clothing immediately and dispose of safely. If the patient is likely to become unconscious, place and transport in stable sideways position.

After inhalation

Call a doctor immediately. In case of respiratory arrest induce breathing with a respiratory device. Seek medical advice. Ensure supply of fresh air.

After skin contact

Trade name: Methanol, CH₃OH, technical, 99.85%**Current version :** 4.3.1, issued: 12.01.2022**Replaced version:** 4.3.0, issued: 10.10.2019**Region:** GB

In case of contact with skin wash off immediately with soap and water.

After eye contact

In case of contact with eyes rinse thoroughly with copious amounts of water and seek medical advice.

After ingestion

Seek medical attention. If necessary administer salt solution (2-3 tablespoons per 0.5 litres water). Not to apply to infants. Induce the patient to vomit of his own accord only if fully conscious.

4.2 Most important symptoms and effects, both acute and delayed**Symptoms**

Unconsciousness; Light-headedness; Dizziness; Headache; Sensitivity to light

Effects

Risk of circulatory collapse

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Alcohol-resistant foam; Extinguishing powder; Water spray jet; Carbon dioxide

Unsuitable extinguishing media

High power water jet

5.2 Special hazards arising from the substance or mixture

Combustion products of this material have to be classed invariably as respiratory poison. In the event of fire, the following can be released: Carbon monoxide (CO); Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Wear full protective suit. Do not inhale explosion and/or combustion byproducts. Use self-contained breathing apparatus. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations. Cool endangered containers with water spray jet. Apply foam in large quantities because some of it will be destroyed by the product.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Keep away from ignition sources. Use personal protective clothing. Keep people away and stay on the upwind side.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Suppress gases/vapours/mists with water spray jet. Prevent spread over a wide area (e.g. by containment or oil barriers). Do not allow to enter drains or waterways.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material. Room ventilation via exhaust system.

6.4 Reference to other sections

Information regarding waste disposal, see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Advice on safe handling**

Open and handle container with care. Do not use for cleaning purposes. Provide good ventilation at the work area (local exhaust ventilation, if necessary).

General protective and hygiene measures

Avoid contact with eyes and skin. Wash hands before breaks and after work. Do not inhale vapours. Keep away from foodstuffs and beverages. Remove soiled or soaked clothing immediately. Have emergency shower available. Provide eye wash fountain in work area.

Advice on protection against fire and explosion

Keep away from sources of ignition - refrain from smoking. Take precautionary measures against static charges.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions**

Keep container tightly closed. Storage: cool and dry

Requirements for storage rooms and vessels

Prevent penetration into the ground. Keep only in the original container.

Incompatible products

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 4.3.1, issued: 12.01.2022

Replaced version: 4.3.0, issued: 10.10.2019

Region: GB

Do not store together with oxidizing agents.

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limit values**

No	Substance name	CAS no.	EC no.
1	methanol	67-56-1	200-659-6
	2006/15/EC		
	Methanol		
	WEL long-term (8-hr TWA reference period)	260	mg/m ³ 200 ppm
	Skin resorption / sensibilisation	Skin	
	List of approved workplace exposure limits (WELs) / EH40		
	Methanol		
	WEL short-term (15 min reference period)	333	mg/m ³ 250 ppm
	WEL long-term (8-hr TWA reference period)	266	mg/m ³ 200 ppm
	Comments	Sk	

DNEL, DMEL and PNEC values**DNEL values (worker)**

No	Substance name	CAS / EC no		
	Route of exposure	Exposure time	Effect	Value
1	methanol	67-56-1 200-659-6		
	dermal	Short term (acut)	systemic	20 mg/kg/day
	dermal	Long term (chronic)	systemic	20 mg/kg/day
	inhalative	Short term (acut)	systemic	130 mg/m ³
	inhalative	Short term (acut)	local	130 mg/m ³
	inhalative	Long term (chronic)	systemic	130 mg/m ³
	inhalative	Long term (chronic)	local	130 mg/m ³

DNEL value (consumer)

No	Substance name	CAS / EC no		
	Route of exposure	Exposure time	Effect	Value
1	methanol	67-56-1 200-659-6		
	oral	Long term (chronic)	systemic	4 mg/kg/day
	oral	Short term (acut)	systemic	4 mg/kg/day
	dermal	Short term (acut)	systemic	4 mg/kg/day
	dermal	Long term (chronic)	systemic	4 mg/kg/day
	inhalative	Short term (acut)	systemic	26 mg/m ³
	inhalative	Short term (acut)	local	26 mg/m ³
	inhalative	Long term (chronic)	systemic	26 mg/m ³
	inhalative	Long term (chronic)	local	26 mg/m ³

8.2 Exposure controls**Appropriate engineering controls**

No data available.

Personal protective equipment**Respiratory protection**

In case of insufficient ventilation or long-term effect use breathing apparatus. Self-contained breathing apparatus.

Eye / face protection

Tightly fitting safety glasses (EN 166).

Hand protection

In case of intensive contact, wear protective gloves (EN 374). Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Appropriate Material

butyl

Material thickness

0.6

-

0.8

mm

Breakthrough time

>

480

min

Other

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 4.3.1, issued: 12.01.2022

Replaced version: 4.3.0, issued: 10.10.2019

Region: GB

Fire-resistant antistatic protective clothing.

Environmental exposure controls
 No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

State of aggregation			
liquid			
Form/Colour			
liquid			
colourless			
Odour			
pungent			
pH value			
No data available			
Boiling point / boiling range			
Value	64.7	°C	
Melting point/freezing point			
Value	-97.8	°C	
Decomposition temperature			
No data available			
Flash point			
Value	9.7	°C	
Ignition temperature			
No data available			
Auto-ignition temperature			
Value	455	°C	
Flammability			
No data available			
Lower explosion limit			
No data available			
Upper explosion limit			
No data available			
Vapour pressure			
Value	169.27	hPa	
Reference temperature	25	°C	
Relative vapour density			
No data available			
Relative density			
No data available			
Density			
Value	0.79	-	0.80 g/cm ³
Solubility in water			
Reference temperature	20	°C	
Comments	miscible in all proportions		
Solubility			
No data available			
Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	methanol	67-56-1	200-659-6
log Pow			-0.77
Source	ECHA		
Viscosity			
Value	0.544	-	0.59 mPa*s
Reference temperature	25	°C	
Particle characteristics			
No data available			

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 4.3.1, issued: 12.01.2022

Replaced version: 4.3.0, issued: 10.10.2019

Region: GB

9.2 Other information**Other information**

No data available.

SECTION 10: Stability and reactivity**10.1 Reactivity**

No data available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Reactions with oxidising agents. Formation of explosive gas/air mixtures.

10.5 Incompatible materials

Oxidizing agents

10.6 Hazardous decomposition products

Formaldehyde

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity**

No data available

Acute dermal toxicity

No data available

No	Substance name	CAS no.	EC no.
1	methanol	67-56-1	200-659-6
LD50			17100 mg/kg bodyweight
Species	rabbit		
Source	ECHA		

Acute inhalational toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Reproduction toxicity

No data available

Carcinogenicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Information on other hazards**Endocrine disrupting properties**

No data available.

Other information

No data available.

SECTION 12: Ecological information

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 4.3.1, issued: 12.01.2022

Replaced version: 4.3.0, issued: 10.10.2019

Region: GB

12.1 Toxicity

Toxicity to fish (acute)			
No	Substance name	CAS no.	EC no.
1	methanol	67-56-1	200-659-6
LC50		15400	mg/l
Duration of exposure		96	h
Species	Lepomis macrochirus		
Method	EPA-660 / 3-75-009		
Source	ECHA		

Toxicity to fish (chronic)			
No data available			

Toxicity to Daphnia (acute)			
No	Substance name	CAS no.	EC no.
1	methanol	67-56-1	200-659-6
EC50		22200	mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Method	OECD 202		
Source	ECHA		

Toxicity to Daphnia (chronic)			
No data available			

Toxicity to algae (acute)			
No	Substance name	CAS no.	EC no.
1	methanol	67-56-1	200-659-6
EC50	appr.	22000	mg/l
Duration of exposure		96	h
Species	Pseudokirchneriella subcapitata		
Method	OECD 201		
Source	ECHA		

Toxicity to algae (chronic)			
No data available			

Bacteria toxicity			
No data available			

12.2 Persistence and degradability

Biodegradability			
No	Substance name	CAS no.	EC no.
1	methanol	67-56-1	200-659-6
Type	BOD		
Value		95	%
Duration		20	day(s)
Source	ECHA		
Evaluation	readily biodegradable		

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	methanol	67-56-1	200-659-6
log Pow		-0.77	
Source	ECHA		

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

12.8 Other information

Other information	
Product is not allowed to discharge into aquatic environment, drains or sewage treatment plants.	

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 4.3.1, issued: 12.01.2022

Replaced version: 4.3.0, issued: 10.10.2019

Region: GB

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class	3
Classification code	FT1
Packing group	II
Hazard identification no.	336
UN number	UN1230
Proper shipping name	METHANOL
Tunnel restriction code	D/E
Label	3+6.1

14.2 Transport IMDG

Class	3
Subsidiary Risk	6.1
Packing group	II
UN number	UN1230
Proper shipping name	METHANOL
EmS	F-E, S-D
Label	3+6.1

14.3 Transport ICAO-TI / IATA

Class	3
Subrisk	6.1
Packing group	II
UN number	UN1230
Proper shipping name	Methanol
Label	3+6.1

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user

No data available.

14.7 Maritime transport in bulk according to IMO instruments

Not relevant

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)

In accordance with the REACH regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

REACH candidate list of substances of very high concern (SVHC) for authorisation

In accordance with article 57 and article 59 of the Reach regulation (EC) 1907/2006, this substance is not considered as subject to listing in annex XIV, inventory of substances requiring authorisation ("Authorization list").

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES

The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII. No 3, 40

The substance is considered being subject to REACH regulation (EC) 1907/2006 annex XVII.

No	Substance name	CAS no.	EC no.	No
1	methanol	67-56-1	200-659-6	69, 75

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

This substance is subject to Part 2 of Annex I

Trade name: Methanol, CH₃OH, technical, 99.85%**Current version :** 4.3.1, issued: 12.01.2022**Replaced version:** 4.3.0, issued: 10.10.2019**Region:** GB

No	Substance name	CAS no.	EC no.	No
1	methanol	67-56-1	200-659-6	22

15.2 Chemical safety assessment

A chemical safety assessment has been carried out for this substance.

SECTION 16: Other information**Further information**

The information is based on our current knowledge however it does not represent a guarantee of product properties nor does it create any legal obligation.

Sources of key data used to compile the data sheet:

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

List of existing exposition scenarios

ES001 Use as an intermediate, process chemical - industrial use

ES002 Formulation and (re)packing of substance and mixtures - industrial use

ES003 Use in cleaning agents - industrial use

ES004 Use as a laboratory reagent - professional use

Creation of the safety data sheet

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Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

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Prod-ID 44267

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

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Region: GB

SECTION 1: Title and scope of exposure scenario (ES)

1.1 Title exposure scenario (ES)

ES1 Use as an intermediate, process chemical - industrial use

1.2 Scope of exposure scenario (ES)

ES Type Worker Exposure Scenario for substance/mixture

Life cycle stage Industrial end use

Product identifier

Trade name Methanol, CH₃OH, technical, 99.85%
MSK Code: 60003, 60021, 90011, 90042Substance name methanol
REACH registration no. 01-2119433307-44-0036
CAS no. 67-56-1
EC no. 200-659-6

Use descriptors

Sector of use (SU)		
Category	Code	Use description
Main user group	SU3	Industrial uses
Sector of end-use	SU8	Manufacture of bulk, large scale chemicals (including petroleum products)
	SU9	Manufacture of fine chemicals
Environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	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)
Process category (PROC)		
Category	Code	Use description
Process category (PROC)	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
	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)
	PROC15	Use as laboratory reagent

Other information

The information in this ES originate from the CSR.

SECTION 2: Operational conditions (OC) and risk management measures (RMM) controlling exposure towards environment and men

2.1 Product characteristics

State of aggregation		
liquid		
Reference temperature	25	°C
Dustiness		
Not applicable		
Vapour pressure		
Value	169.27	hPa
Reference temperature	25	°C

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

Replaced version: 2.3.0, issued: 03.10.2019

Region: GB

Other information
The efficiency of a risk management measure is a theoretical value. The efficiency describes to which extend (in percent) the calculated exposure can be diminished by applying a certain measure. If the described operational conditions and risk management measures are fulfilled by a downstream user, the efficiency as highlighted in the ES can be applied. A downstream user might check whether the efficiency of the LEV or general ventilation corresponds to his site.
For further instructions related to "Personal protective equipment" please refer to section 8 of the Safety Data Sheet.

2.2 Contributing scenario controlling environmental exposure

Affected environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	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)

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

2.3 Contributing scenario controlling worker exposure

Affected process category (PROC)		
Category	Code	Use description
Process category (PROC)	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
	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)
	PROC15	Use as laboratory reagent

Operational conditions controlling worker exposure

Concentration of substance						
	PROC1		PROC2		PROC3	
Value	≤	100 %	≤	100 %	≤	100 %
Value	≤	100 %	≤	100 %	≤	100 %
Value	≤	100 %	≤	100 %		

Use conditions						
	PROC1		PROC2		PROC3	
Location of use	Indoor use		Indoor use		Indoor use	
Duration of use	≤	8 hours/day	≤	8 hours/day	≤	8 hours/day
Frequency of use	≤	240 days/year	≤	240 days/year	≤	240 days/year
Location of use	Indoor use		Indoor use		Indoor use	
Duration of use	≤	8 hours/day	≤	8 hours/day	≤	8 hours/day
Frequency of use	≤	240 days/year	≤	240 days/year	≤	240 days/year
Location of use	Indoor use		Indoor use			
Duration of use	≤	8 hours/day	≤	8 hours/day		
Frequency of use		240 days/year	≤	240 days/year		

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

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Risk management measures (RMM) controlling worker exposure

Technical measures and efficiency of the risk management measures (in exposure calculation model)		
PROC1	Measures	No special measures are required.
PROC2	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC3	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC4	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC8a	Measures	Provide a good standard of general ventilation (1 to 3 air changes per hour).
	Efficiency (%)	90
PROC8b	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	95
PROC9	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC15	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90

Organisational measures

No special measures are required.

Personal protective equipment and efficiency of the risk management measures (in exposure calculation model)

Hand protection		
PROC1	Measures	No special measures are required.
PROC2	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC3	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC4	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC8a	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC8b	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC9	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC15	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80

SECTION 3: Exposure estimation and reference to sources

3.1 Advice

The Risk Characterization Ratio (RCR) is the quotient of predicted human/environmental exposure and the related DNEL/PNEC. Exposure is calculated based on exposure models as stated below. If $RCR \leq 1$ a use is considered as safe under operational conditions and risk management measures as specified in the exposure scenario.

For DNEL/PNEC values please refer to section 8 of the safety data sheet.

3.2 Exposure estimation - Environment

Affected environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	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)

Used exposure estimation model for calculation of environmental exposure

Used exposure estimation model	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.
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Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

Replaced version: 2.3.0, issued: 03.10.2019

Region: GB

3.3 Exposure estimation - Worker

Affected process category (PROC)		
Category	Code	Use description
Process category (PROC)	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
	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)
	PROC15	Use as laboratory reagent

Used exposure estimation model for calculation of worker exposure	
Used exposure estimation model	EasyTRA Version 3.5
Link to exposure estimation tool	EASY TRA: http://www.easytra.de

Risk characterisation ratio (RCR)				
	Exposure estimation	inhalative	dermal	total
PROC1	Long-term systemic	0.000	0.002	0.002
	Short-term systemic	0.000	0.002	0.002
PROC2	Long-term systemic	0.026	0.014	0.039
	Short-term systemic	0.103	0.014	0.116
PROC3	Long-term systemic	0.051	0.007	0.058
	Short-term systemic	0.205	0.007	0.212
PROC4	Long-term systemic	0.103	0.069	0.171
	Short-term systemic	0.411	0.069	0.479
PROC8a	Long-term systemic	0.257	0.137	0.394
	Short-term systemic	0.513	0.137	0.651
PROC8b	Long-term systemic	0.077	0.137	0.214
	Short-term systemic	0.154	0.137	0.291
PROC9	Long-term systemic	0.205	0.069	0.274
	Short-term systemic	0.411	0.069	0.479
PROC15	Long-term systemic	0.051	0.003	0.055
	Short-term systemic	0.103	0.003	0.106

SECTION 4: Guidance to DU to evaluate whether he works inside the boundaries set by the ES

4.1 Recommendations and advice

Recommendations and general advice

If a downstream user uses the substance/preparation differently than stated in the ES (different operational conditions and/or risk management measures), he has the possibility to vary certain parameters of the exposure assessment. With the help of easy calculations he can check whether he still operates under safe circumstances. This process is called Scaling.

- For additional instructions relating to adaptation of conditions of use in view of a scaling, pls. see the "ECHA Guidance for downstream users" <http://echa.europa.eu/regulations/reach/downstream-users>

Scaling advice

Type of ventilation

If the type of ventilation at the use site of a downstream user (DU) differs from the instructions in the ES, a linear correlation between the RCR (Inhalation) and the type of ventilation exists. Following scaling factors (f) apply: General ventilation (< 3 air changes per hour) = 1; good general ventilation (3 to 5 air changes per hour, corresponds to outdoor use) = 0,7; enhanced general ventilation (> 5 air changes per hour) = 0,3.

$RCR(DU) = f(DU) * RCR$ (as stated in ES) / f (type of ventilation stated in ES)

In the same manner a scaling for the efficiency of the local extract ventilation (LEV) can be applied.

Duration of use

If the duration of the use by a worker at a downstream user (DU) site differs from the instructions in the ES, a linear correlation between the RCR (Inhalation) and the duration of use exist. Following scaling factors (f) apply: duration > 4 hours/day = 1; duration: 1-4 hours/day = 0,6; duration: 15 min/day – 1 hour/day = 0,2; duration < 15 min/day = 0,1.

$RCR(DU) = f(DU) * RCR$ (as stated in ES) / f (duration in ES)

Trade name: Methanol, CH₃OH, technical, 99.85%**Current version :** 2.4.0, issued: 19.04.2022**Replaced version:** 2.3.0, issued: 03.10.2019**Region:** GB

Concentration of the substance in the product

If the downstream user (DU) uses the substance in a different concentration than the one stated in the ES, a linear correlation between the RCR (Inhalation) and the RCR (dermal) and the concentration exists. Following scaling factors (f) apply: Concentration >25% = 1; concentration >= 5% = 0,6; concentration >= 1% = 0,2; concentration < 1% = 0,1.
RCR (DU) = f(DU) * RCR (as stated in ES) / f (concentration in ES).

4.2 Exposure estimation - Environment

Used exposure estimation model for calculation of environmental exposure	
Used exposure estimation model	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

4.3 Exposure estimation - Worker

Used exposure estimation model for calculation of worker exposure	
Used exposure estimation model	EasyTRA Version 3.5
Link to exposure estimation tool	EASY TRA: http://www.easytra.de

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

Replaced version: 2.3.0, issued: 10.10.2019

Region: GB

SECTION 1: Title and scope of exposure scenario (ES)

1.1 Title exposure scenario (ES)

ES2 Formulation and (re)packing of substance and mixtures - industrial use

1.2 Scope of exposure scenario (ES)

ES Type Worker Exposure Scenario for substance/mixture

Life cycle stage Formulation

Product identifier

Trade name Methanol, CH₃OH, technical, 99.85%
MSK Code: 60003, 60021, 90011, 90042Substance name methanol
REACH registration no. 01-2119433307-44-0036
CAS no. 67-56-1
EC no. 200-659-6

Use descriptors

Sector of use (SU)		
Category	Code	Use description
Main user group	SU3	Industrial uses
Environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	ERC2	Formulation of preparations
Process category (PROC)		
Category	Code	Use description
Process category (PROC)	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)
	PROC15	Use as laboratory reagent

Other information

The information in this ES originate from the CSR.

SECTION 2: Operational conditions (OC) and risk management measures (RMM) controlling exposure towards environment and men

2.1 Product characteristics

State of aggregation		
liquid		
Reference temperature	25	°C
Dustiness		
Not applicable		
Vapour pressure		
Value	169.27	hPa
Reference temperature	25	°C
Other information		
The efficiency of a risk management measure is a theoretical value. The efficiency describes to which extend (in percent) the calculated exposure can be diminished by applying a certain measure. If the described operational conditions and risk management measures are fulfilled by a downstream user, the efficiency as highlighted in the ES can be applied. A downstream user might check whether the efficiency of the LEV or general ventilation corresponds to his site.		
For further instructions related to "Personal protective equipment" please refer to section 8 of the Safety Data Sheet.		

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

Replaced version: 2.3.0, issued: 10.10.2019

Region: GB

2.2 Contributing scenario controlling environmental exposure

Affected environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	ERC2	Formulation of preparations

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

2.3 Contributing scenario controlling worker exposure

Affected process category (PROC)		
Category	Code	Use description
Process category (PROC)	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)
	PROC15	Use as laboratory reagent

Operational conditions controlling worker exposure

Concentration of substance						
	PROC1		PROC2		PROC3	
Value	≤	100 %	≤	100 %	≤	100 %
	PROC4		PROC5		PROC8a	
Value	≤	100 %	≤	100 %	≤	100 %
	PROC8b		PROC9		PROC15	
Value	≤	100 %	≤	100 %	≤	100 %

Use conditions						
	PROC1		PROC2		PROC3	
Location of use	Indoor use		Indoor use		Indoor use	
Duration of use	≤	8 hours/day	≤	8 hours/day	≤	8 hours/day
Frequency of use	≤	240 days/year	≤	240 days/year	≤	240 days/year
	PROC4		PROC5		PROC8a	
Location of use	Indoor use		Indoor use		Indoor use	
Duration of use	≤	8 hours/day	≤	8 h	≤	8 hours/day
Frequency of use	≤	240 days/year	≤	240 days/year	≤	240 days/year
	PROC8b		PROC9		PROC15	
Location of use	Indoor use		Indoor use		Indoor use	
Duration of use	≤	8 hours/day	≤	8 hours/day	≤	8 hours/day
Frequency of use	≤	240 days/year	≤	240 days/year	≤	240 days/year

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

Replaced version: 2.3.0, issued: 10.10.2019

Region: GB

Risk management measures (RMM) controlling worker exposure

Technical measures and efficiency of the risk management measures (in exposure calculation model)		
PROC1	Measures	No special measures are required.
PROC2	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC3	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC4	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC5	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC8a	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC8b	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	95
PROC9	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC15	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90

Organisational measures

No special measures are required.

Personal protective equipment and efficiency of the risk management measures (in exposure calculation model)

Hand protection		
PROC1	Measures	No special measures are required.
PROC2	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC3	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC4	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC5	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC8a	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC8b	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC9	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC15	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80

SECTION 3: Exposure estimation and reference to sources

3.1 Advice

The Risk Characterization Ratio (RCR) is the quotient of predicted human/environmental exposure and the related DNEL/PNEC. Exposure is calculated based on exposure models as stated below. If $RCR \leq 1$ a use is considered as safe under operational conditions and risk management measures as specified in the exposure scenario.

For DNEL/PNEC values please refer to section 8 of the safety data sheet.

3.2 Exposure estimation - Environment

Affected environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	ERC2	Formulation of preparations
Used exposure estimation model for calculation of environmental exposure		
Used exposure estimation model	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.	

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

Replaced version: 2.3.0, issued: 10.10.2019

Region: GB

3.3 Exposure estimation - Worker

Affected process category (PROC)		
Category	Code	Use description
Process category (PROC)	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)
	PROC15	Use as laboratory reagent

Used exposure estimation model for calculation of worker exposure	
Used exposure estimation model	EasyTRA Version 3.5
Link to exposure estimation tool	EASY TRA: http://www.easytra.de

Risk characterisation ratio (RCR)				
	Exposure estimation	inhalative	dermal	total
PROC1	Long-term systemic	0.000	0.002	0.002
	Short-term systemic	0.000	0.002	0.002
PROC2	Long-term systemic	0.026	0.014	0.039
	Short-term systemic	0.103	0.014	0.116
PROC3	Long-term systemic	0.052	0.007	0.058
	Short-term systemic	0.206	0.007	0.212
PROC4	Long-term systemic	0.103	0.069	0.171
	Short-term systemic	0.411	0.069	0.479
PROC5	Long-term systemic	0.257	0.137	0.394
	Short-term systemic	0.103	0.137	0.240
PROC8a	Long-term systemic	0.257	0.137	0.394
	Short-term systemic	0.513	0.137	0.651
PROC8b	Long-term systemic	0.077	0.137	0.214
	Short-term systemic	0.154	0.137	0.291
PROC9	Long-term systemic	0.205	0.069	0.274
	Short-term systemic	0.411	0.069	0.479
PROC15	Long-term systemic	0.051	0.003	0.055
	Short-term systemic	0.102	0.003	0.105

SECTION 4: Guidance to DU to evaluate whether he works inside the boundaries set by the ES

4.1 Recommendations and advice

Recommendations and general advice

If a downstream user uses the substance/preparation differently than stated in the ES (different operational conditions and/or risk management measures), he has the possibility to vary certain parameters of the exposure assessment. With the help of easy calculations he can check whether he still operates under safe circumstances. This process is called Scaling.

- For additional instructions relating to adaptation of conditions of use in view of a scaling, pls. see the "ECHA Guidance for downstream users" <http://echa.europa.eu/regulations/reach/downstream-users>

Scaling advice

Type of ventilation

If the type of ventilation at the use site of a downstream user (DU) differs from the instructions in the ES, a linear correlation between the RCR (Inhalation) and the type of ventilation exists. Following scaling factors (f) apply: General ventilation (< 3 air changes per hour) = 1; good general ventilation (3 to 5 air changes per hour, corresponds to outdoor use) = 0,7; enhanced general ventilation (> 5 air changes per hour) = 0,3.

$RCR (DU) = f(DU) * RCR (as\ stated\ in\ ES) / f (type\ of\ ventilation\ stated\ in\ ES)$

In the same manner a scaling for the efficiency of the local extract ventilation (LEV) can be applied.

Duration of use

If the duration of the use by a worker at a downstream user (DU) site differs from the instructions in the ES, a linear correlation between the RCR (Inhalation) and the duration of use exist. Following scaling factors (f) apply: duration > 4 hours/day = 1; duration: 1-4 hours/day = 0,6; duration: 15 min/day – 1 hour/day = 0,2; duration < 15 min/day = 0,1.

$RCR (DU) = f(DU) * RCR (as\ stated\ in\ ES) / f (duration\ in\ ES)$

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

Replaced version: 2.3.0, issued: 10.10.2019

Region: GB

Concentration of the substance in the product

If the downstream user (DU) uses the substance in a different concentration than the one stated in the ES, a linear correlation between the RCR (Inhalation) and the RCR (dermal) and the concentration exists. Following scaling factors (f) apply: Concentration >25% =1; concentration >= 5% = 0,6; concentration >= 1% = 0,2; concentration < 1% = 0,1.

$RCR (DU) = f(DU) * RCR (as\ stated\ in\ ES) / f (concentration\ in\ ES).$

4.2 Exposure estimation - Environment

Used exposure estimation model for calculation of environmental exposure	
Used exposure estimation model	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

4.3 Exposure estimation - Worker

Used exposure estimation model for calculation of worker exposure	
Used exposure estimation model	EasyTRA Version 3.5
Link to exposure estimation tool	EASY TRA: http://www.easytra.de

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

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Region: GB

SECTION 1: Title and scope of exposure scenario (ES)

1.1 Title exposure scenario (ES)

ES3 Use in cleaning agents - industrial use

1.2 Scope of exposure scenario (ES)

ES Type Worker Exposure Scenario for substance/mixture

Life cycle stage Industrial end use

Product identifier

Trade name Methanol, CH₃OH, technical, 99.85%
MSK Code: 60003, 60021, 90011, 90042Substance name methanol
REACH registration no. 01-2119433307-44-0036
CAS no. 67-56-1
EC no. 200-659-6

Use descriptors

Sector of use (SU)		
Category	Code	Use description
Main user group	SU3	Industrial uses
Environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
Process category (PROC)		
Category	Code	Use description
Process category (PROC)	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
	PROC7	Industrial spraying
	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
	PROC10	Roller application or brushing
	PROC13	Treatment of articles by dipping and pouring

Other information

The information in this ES originate from the CSR.

SECTION 2: Operational conditions (OC) and risk management measures (RMM) controlling exposure towards environment and men

2.1 Product characteristics

State of aggregation		
liquid		
Reference temperature	25	°C
Dustiness		
Not applicable		
Vapour pressure		
Value	169.27	hPa
Reference temperature	25	°C
Other information		
The efficiency of a risk management measure is a theoretical value. The efficiency describes to which extend (in percent) the calculated exposure can be diminished by applying a certain measure. If the described operational conditions and risk management measures are fulfilled by a downstream user, the efficiency as highlighted in the ES can be applied. A downstream user might check whether the efficiency of the LEV or general ventilation corresponds to his site.		
For further instructions related to "Personal protective equipment" please refer to section 8 of the Safety Data Sheet.		

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

Replaced version: 2.3.0, issued: 03.10.2019

Region: GB

2.2 Contributing scenario controlling environmental exposure

Affected environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	ERC4	Industrial use of processing aids in processes and products, not becoming part of articles

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

2.3 Contributing scenario controlling worker exposure

Affected process category (PROC)		
Category	Code	Use description
Process category (PROC)	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
	PROC7	Industrial spraying
	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
	PROC10	Roller application or brushing
	PROC13	Treatment of articles by dipping and pouring

Operational conditions controlling worker exposure

Concentration of substance			
	PROC1	PROC2	PROC3
Value	≤ 100 %	≤ 100 %	≤ 100 %
	PROC4	PROC7	PROC8a
Value	≤ 100 %	ca. 25 %	≤ 100 %
	PROC8b	PROC10	PROC13
Value	≤ 100 %	≤ 80 %	≤ 100 %

Use conditions			
	PROC1	PROC2	PROC3
Location of use	Indoor use	Indoor use	Indoor use
Duration of use	≤ 8 hours/day	≤ 8 hours/day	≤ 8 hours/day
Frequency of use	≤ 240 days/year	≤ 240 days/year	≤ 240 days/year
	PROC4	PROC7	PROC8a
Location of use	Indoor use	Indoor use	Indoor use
Duration of use	≤ 8 hours/day	≤ 8 hours/day	≤ 8 hours/day
Frequency of use	≤ 240 days/year	≤ 240 days/year	≤ 240 days/year
	PROC8b	PROC10	PROC13
Location of use	Indoor use	Indoor use	Indoor use
Duration of use	≤ 8 hours/day	≤ 8 hours/day	≤ 8 hours/day
Frequency of use	≤ 240 days/year	≤ 240 days/year	≤ 240 days/year

Conditions for indoor use			
	PROC7	PROC10	
Room size	≥ 1000 m ³	≥ 1000 m ³	

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

Replaced version: 2.3.0, issued: 03.10.2019

Region: GB

Risk management measures (RMM) controlling worker exposure

Technical measures and efficiency of the risk management measures (in exposure calculation model)		
PROC1	Measures	No special measures are required.
PROC2	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC3	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC4	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC7	Measures	Provide a good standard of general ventilation (1 to 3 air changes per hour).
	Efficiency (%)	30
PROC8a	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC8b	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	95
PROC10	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90
PROC13	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	90

Organisational measures

PROC1	No special measures are required.
PROC2	No special measures are required.
PROC3	No special measures are required.
PROC4	No special measures are required.
PROC7	Ensure that the task is being carried out outside the breathing zone of a worker (distance head-product greater than 1m).
PROC8a	No special measures are required.
PROC8b	No special measures are required.
PROC10	No special measures are required.
PROC13	No special measures are required.

Personal protective equipment and efficiency of the risk management measures (in exposure calculation model)

Respiratory protection		
PROC7	Measures	Suitable respiratory protection (APF 10).
	Efficiency (%)	90
Hand protection		
PROC1	Measures	No special measures are required.
PROC2	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC3	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC4	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC7	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC8a	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC8b	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC10	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC13	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

Replaced version: 2.3.0, issued: 03.10.2019

Region: GB

SECTION 3: Exposure estimation and reference to sources

3.1 Advice

The Risk Characterization Ratio (RCR) is the quotient of predicted human/environmental exposure and the related DNEL/PNEC. Exposure is calculated based on exposure models as stated below. If $RCR \leq 1$ a use is considered as safe under operational conditions and risk management measures as specified in the exposure scenario.

For DNEL/PNEC values please refer to section 8 of the safety data sheet.

3.2 Exposure estimation - Environment

Affected environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
Used exposure estimation model for calculation of environmental exposure		
Used exposure estimation model	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.	

3.3 Exposure estimation - Worker

Affected process category (PROC)		
Category	Code	Use description
Process category (PROC)	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
	PROC7	Industrial spraying
	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
	PROC10	Roller application or brushing
	PROC13	Treatment of articles by dipping and pouring

Used exposure estimation model for calculation of worker exposure	
Used exposure estimation model	EasyTRA Version 3.5 Stoffenmanager v3.5
Link to exposure estimation tool	EASY TRA: http://www.easytra.de Stoffenmanager: https://www.stoffenmanager.nl/

Risk characterisation ratio (RCR)				
	Exposure estimation	inhalative	dermal	total
PROC1	Long-term systemic	0.000	0.002	0.002
	Short-term systemic	0.000	0.002	0.002
PROC2	Long-term systemic	0.026	0.013	0.039
	Short-term systemic	0.103	0.014	0.116
PROC3	Long-term systemic	0.051	0.007	0.058
	Short-term systemic	0.205	0.007	0.212
PROC4	Long-term systemic	0.102	0.069	0.171
	Short-term systemic	0.411	0.069	0.479
PROC7	Long-term systemic	0.147	0.107	0.254
	Short-term systemic	0.147	0.107	0.254
PROC8a	Long-term systemic	0.257	0.137	0.394
	Short-term systemic	0.513	0.137	0.650
PROC8b	Long-term systemic	0.077	0.137	0.214
	Short-term systemic	0.154	0.137	0.291
PROC10	Long-term systemic	0.205	0.219	0.424
	Short-term systemic	0.411	0.219	0.630
PROC13	Long-term systemic	0.257	0.137	0.394
	Short-term systemic	0.513	0.137	0.651

Other information	
PROC7	Route of exposure: Dermal
	Exposure assessment model: Stoffenmanager v3.5

SECTION 4: Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

Replaced version: 2.3.0, issued: 03.10.2019

Region: GB

4.1 Recommendations and advice

Recommendations and general advice

If a downstream user uses the substance/preparation differently than stated in the ES (different operational conditions and/or risk management measures), he has the possibility to vary certain parameters of the exposure assessment. With the help of easy calculations he can check whether he still operates under safe circumstances. This process is called Scaling.

- For additional instructions relating to adaptation of conditions of use in view of a scaling, pls. see the "ECHA Guidance for downstream users" <http://echa.europa.eu/regulations/reach/downstream-users>

Scaling advice

Type of ventilation

If the type of ventilation at the use site of a downstream user (DU) differs from the instructions in the ES, a linear correlation between the RCR (Inhalation) and the type of ventilation exists. Following scaling factors (f) apply: General ventilation (< 3 air changes per hour) = 1; good general ventilation (3 to 5 air changes per hour, corresponds to outdoor use) = 0,7; enhanced general ventilation (> 5 air changes per hour) = 0,3.

$RCR(DU) = f(DU) * RCR(\text{as stated in ES}) / f(\text{type of ventilation stated in ES})$

In the same manner a scaling for the efficiency of the local extract ventilation (LEV) can be applied.

Duration of use

If the duration of the use by a worker at a downstream user (DU) site differs from the instructions in the ES, a linear correlation between the RCR (Inhalation) and the duration of use exist. Following scaling factors (f) apply: duration > 4 hours/day = 1; duration: 1-4 hours/day = 0,6; duration: 15 min/day – 1 hour/day = 0,2; duration < 15 min/day = 0,1.

$RCR(DU) = f(DU) * RCR(\text{as stated in ES}) / f(\text{duration in ES})$

Concentration of the substance in the product

If the downstream user (DU) uses the substance in a different concentration than the one stated in the ES, a linear correlation between the RCR (Inhalation) and the RCR (dermal) and the concentration exists. Following scaling factors (f) apply: Concentration >25% = 1; concentration >= 5% = 0,6; concentration >= 1% = 0,2; concentration < 1% = 0,1.

$RCR(DU) = f(DU) * RCR(\text{as stated in ES}) / f(\text{concentration in ES})$

4.2 Exposure estimation - Environment

Used exposure estimation model for calculation of environmental exposure

Used exposure estimation model	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.
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4.3 Exposure estimation - Worker

Used exposure estimation model for calculation of worker exposure

Used exposure estimation model	EasyTRA Version 3.5 Stoffenmanager v3.5
Link to exposure estimation tool	EASY TRA: http://www.easytra.de Stoffenmanager: https://www.stoffenmanager.nl/

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

Trade name: Methanol, CH₃OH, technical, 99.85%

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SECTION 1: Title and scope of exposure scenario (ES)

1.1 Title exposure scenario (ES)

ES4 Use as a laboratory reagent - professional use

1.2 Scope of exposure scenario (ES)

ES Type Worker Exposure Scenario for substance/mixture

Life cycle stage Professional end use

Product identifier

Trade name Methanol, CH₃OH, technical, 99.85%
MSK Code: 60003, 60021, 90011, 90042Substance name methanol
REACH registration no. 01-2119433307-44-0036
CAS no. 67-56-1
EC no. 200-659-6

Use descriptors

Sector of use (SU)		
Category	Code	Use description
Main user group	SU22	Professional uses
Environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	ERC8a	Wide dispersive indoor use of processing aids in open systems
Process category (PROC)		
Category	Code	Use description
Process category (PROC)	PROC10	Roller application or brushing
	PROC15	Use as laboratory reagent

SECTION 2: Operational conditions (OC) and risk management measures (RMM) controlling exposure towards environment and men

2.1 Product characteristics

State of aggregation		
liquid		
Reference temperature	25	°C
Dustiness		
Not applicable		
Vapour pressure		
Value	169.27	hPa
Reference temperature	25	°C
Other information		
The efficiency of a risk management measure is a theoretical value. The efficiency describes to which extend (in percent) the calculated exposure can be diminished by applying a certain measure. If the described operational conditions and risk management measures are fulfilled by a downstream user, the efficiency as highlighted in the ES can be applied. A downstream user might check whether the efficiency of the LEV or general ventilation corresponds to his site.		
For further instructions related to "Personal protective equipment" please refer to section 8 of the Safety Data Sheet.		

2.2 Contributing scenario controlling environmental exposure

Affected environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	ERC8a	Wide dispersive indoor use of processing aids in open systems

As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

2.3 Contributing scenario controlling worker exposure

Affected process category (PROC)		
Category	Code	Use description
Process category (PROC)	PROC10	Roller application or brushing
	PROC15	Use as laboratory reagent

Trade name: Methanol, CH₃OH, technical, 99.85%

Current version : 2.4.0, issued: 19.04.2022

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Operational conditions controlling worker exposure

Concentration of substance				
	PROC10		PROC15	
Value	≤ 5	%	≤ 100	%

Use conditions				
	PROC10		PROC15	
Location of use	Indoor use		Indoor use	
Duration of use	≤ 8	hours/day	≤ 8	hours/day
Frequency of use	≤ 240	days/year	≤ 240	days/year

Risk management measures (RMM) controlling worker exposure

Technical measures and efficiency of the risk management measures (in exposure calculation model)		
PROC10	Measures	No special measures are required.
PROC15	Measures	Handle only at a place with local exhaust system (or another appropriate exhaust).
	Efficiency (%)	80

Organisational measures	
No special measures are required.	

Personal protective equipment and efficiency of the risk management measures (in exposure calculation model)

Hand protection		
PROC10	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80
PROC15	Measures	Wear suitable gloves tested to EN374.
	Efficiency (%)	80

SECTION 3: Exposure estimation and reference to sources**3.1 Advice**

The Risk Characterization Ratio (RCR) is the quotient of predicted human/environmental exposure and the related DNEL/PNEC. Exposure is calculated based on exposure models as stated below. If $RCR \leq 1$ a use is considered as safe under operational conditions and risk management measures as specified in the exposure scenario.

For DNEL/PNEC values please refer to section 8 of the safety data sheet.

3.2 Exposure estimation - Environment

Affected environmental release category (ERC)		
Category	Code	Use description
Environmental release category (ERC)	ERC8a	Wide dispersive indoor use of processing aids in open systems

Used exposure estimation model for calculation of environmental exposure	
Used exposure estimation model	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

3.3 Exposure estimation - Worker

Affected process category (PROC)		
Category	Code	Use description
Process category (PROC)	PROC10	Roller application or brushing
	PROC15	Use as laboratory reagent

Used exposure estimation model for calculation of worker exposure	
Used exposure estimation model	EasyTRA Version 3.5
Link to exposure estimation tool	EASY TRA: http://www.easytra.de

Risk characterisation ratio (RCR)				
	Exposure estimation	inhalative	dermal	total
PROC10	Long-term systemic	0.257	0.014	0.270
	Short-term systemic	0.513	0.014	0.527
PROC15	Long-term systemic	0.103	0.003	0.106
	Short-term systemic	0.206	0.003	0.209

SECTION 4: Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Trade name: Methanol, CH₃OH, technical, 99.85%

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4.1 Recommendations and advice

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Scaling advice

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Concentration of the substance in the product

If the downstream user (DU) uses the substance in a different concentration than the one stated in the ES, a linear correlation between the RCR (Inhalation) and the RCR (dermal) and the concentration exists. Following scaling factors (f) apply: Concentration >25% = 1; concentration >= 5% = 0,6; concentration >= 1% = 0,2; concentration < 1% = 0,1.

$RCR(DU) = f(DU) * RCR(\text{as stated in ES}) / f(\text{concentration in ES})$

4.2 Exposure estimation - Environment

Used exposure estimation model for calculation of environmental exposure	
Used exposure estimation model	As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed.

4.3 Exposure estimation - Worker

Used exposure estimation model for calculation of worker exposure	
Used exposure estimation model	EasyTRA Version 3.5
Link to exposure estimation tool	EASY TRA: http://www.easytra.de

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.