

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



OQEMA

Benzyl alcohol

Version number: 2.0
Replaces version of: 2018-01-17 (1)

Revision: 2018-06-15
First version: 2018-01-17

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

1.1 Product identifier

Trade name	<u>Benzyl alcohol</u>
Product number	813339
Registration number (REACH)	01-2119492630-38-xxxx
EC number	202-859-9
CAS number	100-51-6

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

Relevant identified uses	Solvent for various applications Intermediate for organic synthesis
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1.3 Details of the supplier of the safety data sheet

Oqema Contract GmbH Nauheimer Str. 37 70372 Stuttgart Germany	Telephone: (+)49 711 55381 0 Telefax: (+)49 711 55381 30 Website: www.oqema.com
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e-mail (competent person)	msds-service@oqema.com
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1.4 Emergency telephone number

Poison centre			
Country	Name	Telephone	Telefax
	Giftnotruf Mainz	+49 (0) 6131-19240	+49 (0) 6131 - 23 2468

As above or next toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Benzyl alcohol

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
3.10	acute toxicity (oral)	4	Acute Tox. 4	H302
3.11	acute toxicity (inhal.)	4	Acute Tox. 4	H332
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319

for full text of abbreviations: see SECTION 16

2.2 Label elements

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

Signal word warning

Pictograms

GHS07



Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H319 Causes serious eye irritation.

Precautionary statements

P261 Avoid breathing mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.

P330 Rinse mouth.

2.3 Other hazards

Vapours may form explosive mixtures with air.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance benzyl alcohol

Identifiers

REACH Reg. No 01-2119492630-38-xxxx

CAS No 100-51-6

EC No 202-859-9

Molecular formula C7H8O

Benzyl alcohol

Molar mass

108.1 g/mol

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Self-protection of the first aider.

Remove affected person from the danger area and lay down.

Do not leave affected person unattended.

Take off immediately all contaminated clothing.

Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Following ingestion

Rinse mouth. Do not induce vomiting.

Get immediate medical advice/attention.

Notes for the doctor

none

4.2 Most important symptoms and effects, both acute and delayed

Headache.

Unconsciousness.

Nausea.

Causes eye irritation.

Harmful if swallowed or if inhaled.

Dizziness.

Pneumonia.

4.3 Indication of any immediate medical attention and special treatment needed

none

Benzyl alcohol

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Danger of bursting container.

Hazardous combustion products

carbon monoxide (CO), carbon dioxide (CO₂), pyrolysis products, toxic, irritant vapors / gases, Combustible / flammable vapors

5.3 Advice for firefighters

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

self-contained breathing apparatus (EN 133)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Avoid breathing mist/vapours/spray.

Avoid contact with skin and eyes.

Eliminate all ignition sources if safe to do so.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

Benzyl alcohol

6.3 Methods and material for containment and cleaning up

Advices on how to clean up a spill

Collect spillage.

Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes.

Do not breathe vapour/spray.

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

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

Specific notes/details

Vapours may form explosive mixtures with air.

Handling of incompatible substances or mixtures

Keep away from

oxidisers

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Explosive atmospheres

Store at temperatures not exceeding 50 °C/122 °F.

Benzyl alcohol

Flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge.

Incompatible substances or mixtures

Incompatible materials: see section 10.
Observe hints for combined storage.
Store away from oxidizing agents.

Protect against external exposure, such as

heat, humidity, direct light irradiation, water, contact with air/oxygen

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.
Store in a dry place. Store in a closed container.
Store in a well-ventilated place. Keep cool.

Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.
Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Storage temperature

maximum storage temperature: 50 °C

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	8 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
DNEL	22 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	4 mg/kg bw/day	human, oral	consumer (private households)	chronic - systemic effects
DNEL	4 mg/kg bw/day	human, dermal	consumer (private households)	chronic - systemic effects
DNEL	5.4 mg/cm ³	human, inhalatory	consumer (private households)	chronic - systemic effects

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Environmental values

Relevant PNECs and other threshold levels		
Endpoint	Threshold level	Environmental compartment
PNEC	1 mg/l	freshwater
PNEC	0.1 mg/l	marine water
PNEC	39 mg/l	sewage treatment plant (STP)
PNEC	5.27 mg/kg	freshwater sediment
PNEC	0.527 mg/kg	marine sediment
PNEC	0.456 mg/kg	soil
PNEC	2.3 mg/l	water

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection. (EN 166).

Hand protection

Material	Material thickness	Breakthrough times of the glove material
IIR: isobutene-isoprene (butyl) rubber	≥ 0,7 mm	>480 minutes (permeation: level 6)
FKM: fluoro-elastomer	≥ 0,7 mm	>480 minutes (permeation: level 6)

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection

Filtering device (EN 147).

Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Form	fluid
Colour	colourless
Odour	faintly perceptible
Odour threshold	not determined

Other safety parameters

pH (value)	not applicable
Melting point/freezing point	-15.4 °C
Initial boiling point and boiling range	205.4 °C
Flash point	100 – 101 °C (DIN 51758)
Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)

Explosive limits

Lower explosion limit (LEL)	1.3 vol%
Upper explosion limit (UEL)	13 vol%
Vapour pressure	0.13 hPa at 20 °C
Density	1.04 g/cm ³ at 20 °C
Relative density	not determined

Solubility(ies)

Water solubility	40 g/l at 20 °C
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Partition coefficient

n-octanol/water (log KOW)	1.05 (20 °C)
Auto-ignition temperature	435 °C
Relative self-ignition temperature for solids	not relevant (Fluid)
Decomposition temperature	not determined

Viscosity

Kinematic viscosity	these information are not available
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Benzyl alcohol

Dynamic viscosity	5 – 7 mPa s at 20 °C
Explosive properties	not explosive, vapours may form explosive mixtures with air
Oxidising properties	shall not be classified as oxidising

9.2 Other information

Surface tension	39 dyn/cm (20 °C) (Mookerjee BD, Wilson RA; Benzyl Alcohol and beta-Phenethyl Alcohol. Kirk-Othmer Encyclopedia of Chemical Technology. (1999-2014). New York, NY: John Wiley & Sons. Online Posting Date: 4 Dec 2000)
Temperature class (EU, acc. to ATEX)	T2

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Polymerisation.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Humidity.

10.5 Incompatible materials

acids, oxidisers, sulphuric acid

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgement (weight of evidence determination).

Benzyl alcohol

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Harmful if swallowed.

Harmful if inhaled.

Dermal:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Classification could not be established because:

Exposure route	Endpoint	Value	Species	Method	Source	Notes
oral	LD50	1,620 mg/kg	rat, male		ECHA	
inhalation: dust/mist	LC50	>4,178 mg/m ³ /4h	rat	OECD Guideline 403	ECHA	keine Mortalität bei max. erreich- barer Konz. (Nebel)

Skin corrosion/irritation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Serious eye damage/eye irritation

Causes serious eye irritation.

(ECHA, OECD Guideline 405)

Respiratory or skin sensitisation

Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Shall not be classified as carcinogenic.

(ECHA, OECD Guideline 451)

Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

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Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Chronic toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	NOAEL	400 mg/kg bw/day	rat	OECD Guideline 451	ECHA
inhalation: dust/mist	NOAEC	1,072 mg/m ³	rat	OECD Guideline 412	ECHA

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Based on available data, the classification criteria are not met.

Endpoint	Value	Species	Method	Source	Exposure time
LC50	460 mg/l	fathead minnow (Pimephales promelas)	EPA OPP 72-1	ECHA	96 h
EC50	230 mg/l	daphnia magna	OECD Guideline 202	ECHA	48 h
ErC50	770 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA	72 h

Aquatic toxicity (chronic)

Based on available data, the classification criteria are not met.

Endpoint	Value	Species	Method	Source	Exposure time
EC50	66 mg/l	daphnia magna	OECD Guideline 211	ECHA	21 d
NOEC	51 mg/l	daphnia magna	OECD Guideline 211	ECHA	21 d

12.2 Persistence and degradability

Process of degradability				
Process	Degradation rate	Time	Method	Source
oxygen depletion	92 - 96 %	14 d	OECD 301C	ECHA
DOC removal	95 - 97 %	21 d	OECD 301A	ECHA

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Biodegradation

The substance is readily biodegradable.

Persistence

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

n-octanol/water (log KOW)

1.05 (20 °C)
(ECHA)

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Other adverse effects

Data are not available.

Endocrine disrupting potential

Not listed.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 1

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	UN number	not subject to transport regulations
14.2	UN proper shipping name	-
14.3	Transport hazard class(es)	
	Class	-
14.4	Packing group	-

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14.5 Environmental hazards

-

14.6 Special precautions for user

There is no additional information.

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

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

Not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Dangerous substances with restrictions (REACH, Annex XVII)		
Name of substance	Name acc. to inventory	Type of registration
benzyl alcohol	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	1907/2006/EC annex XVII

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

not listed

Seveso Directive

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
	not assigned		

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

not listed

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Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

not listed

Regulation 98/2013/EU on the marketing and use of explosives precursors

not listed

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance by the supplier.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)
1.1	Trade name: BENZYLALKOHOL	Trade name: Benzyl alcohol
1.3	Details of the supplier of the safety data sheet: Telephone: (+)49 711 55381 0 Telefax: (+)49 711 55381 30	Details of the supplier of the safety data sheet: Telephone: (+)49 711 55381 0 Telefax: (+)49 711 55381 30 Website: www.oqema.com
1.4	Emergency telephone number: As above or next toxicological information centre.	Emergency telephone number
1.4		Poison centre: change in the listing (table)
2.2		Precautionary statements: change in the listing (table)
3.1	Index No: 603-057-00-5	
8.2	Eye/face protection: Wear eye/face protection.	Eye/face protection: Wear eye/face protection. (EN 166).
15.1		Dangerous substances with restrictions (REACH, Annex XVII): change in the listing (table)

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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Abbr.	Descriptions of used abbreviations
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
SVHC	Substance of Very High Concern
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. 2016 - ATP 9 2016/1179.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

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Disclaimer

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.