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

Polyvinyl alcohol 49-88, partially saponified

article number: 1T34 date of compilation: 2022-07-07 Version: **3.0 en** Revision: 2024-03-04

Replaces version of: 2023-01-18

Version: (2)



Product identifier 1.1

Identification of the substance Polyvinyl alcohol 49-88, partially saponified

Article number 1T34

CAS number 25213-24-5

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

Relevant identified uses: Laboratory chemical

Laboratory and analytical use

Uses advised against: Do not use for private purposes (household).

Food, drink and animal feedingstuffs.

Details of the supplier of the safety data sheet 1.3

Carl Roth GmbH + Co. KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone:+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 e-mail: sicherheit@carlroth.de Website: www.carlroth.de

sheet:

e-mail (competent person): sicherheit@carlroth.de

1.4 **Emergency telephone number**

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

This substance does not meet the criteria for classification.

2.2 **Label elements**

Labelling

not required

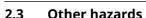
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Results of PBT and vPvB assessment

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

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of \geq 0,1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance Polyvinyl alcohol $\text{Molecular formula} \qquad \qquad (C_4 H_6 O_2 \cdot C_2 H_4 O) n$

CAS No 25213-24-5

Impurities/additives/constituents:

Name of substance	Identifier	Wt%
Methanol	CAS No 67-56-1	<3
	EC No 200-659-6	
	Index No 603-001-00-X	
Acetic acid methyl ester	CAS No 79-20-9	< 2
	EC No 201-185-2	
	Index No 607-021-00-X	

Remarks

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

No special measures are necessary.

Following inhalation

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

Following skin contact

Rinse skin with water/shower.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

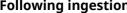
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4.2



water, foam, dry extinguishing powder, ABC-powder

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

onable distance. Wear self-contained breathing apparatus.



Control of dust.

6.2 **Environmental precautions**

6.3 Methods and material for containment and cleaning up

Covering of drains. Take up mechanically.

Advice on how to clean up a spill

Take up mechanically.

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Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

Indication of any immediate medical attention and special treatment needed 4.3

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings!

Unsuitable extinguishing media

Combustible.

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reas-

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures 6.1



For non-emergency personnel

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose

Advice on how to contain a spill

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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**

No special measures are necessary.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Ventilation requirements

Use local and general ventilation.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Coun try	Name of agent	CAS No	Identifi- er	TWA [mg/ m³]	STEL [mg/ m³]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
GB	dust		WEL	10			i	EH40/2005
GB	dust		WEL	4			r	EH40/2005

Notation

Ceiling value is a limit value above which exposure should not occur Inhalable fraction Ceiling-C

Respirable fraction

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-

minute period (unless otherwise specified)
Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified) TWA

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Relevant DNELs of components Name of sub-**CAS No** End-**Threshol Protection Used** in **Exposure time** d level goal, route of stance point exposure Methanol 67-56-1 **DNEL** 130 mg/m³ human, inhalatworker (industry) chronic - systemic effects orv Methanol 67-56-1 DNEL 130 mg/m³ human, inhalatworker (industry) acute - systemic effects ory human, inhalatchronic - local ef-Methanol 67-56-1 DNEL 130 mg/m³ worker (industry) ory fects Methanol 67-56-1 DNEL 130 mg/m³ human, inhalatworker (industry) acute - local effects ory Methanol 67-56-1 DNEL 20 mg/kg human, dermal worker (industry) chronic - systemic bw/day effects Methanol 67-56-1 DNEL 20 mg/kg human, dermal worker (industry) acute - systemic bw/day effects DNEL Acetic acid methyl 79-20-9 300 mg/m³ human, inhalatworker (industry) chronic - systemic effects ester ory 3.777 mg/ Acetic acid methyl 79-20-9 DNEL human, inhalatacute - systemic worker (industry) ester m³ ory effects Acetic acid methyl 79-20-9 DNEL 620 mg/m³ human, inhalatchronic - local efworker (industry) fects ester

ory

human, dermal

worker (industry)

chronic - systemic

effects

Relevant PNECs of components

79-20-9

DNEL

43 mg/kg bw/day

Acetic acid methyl

Name of sub- stance	CAS No	End- point	Threshol d level	Organism	Environmental compartment	Exposure time
Methanol	67-56-1	PNEC	20,8 ^{mg} / _l	aquatic organ- isms	freshwater	short-term (single instance)
Methanol	67-56-1	PNEC	2,08 ^{mg} / _l	aquatic organ- isms	marine water	short-term (single instance)
Methanol	67-56-1	PNEC	100 ^{mg} / _l	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)
Methanol	67-56-1	PNEC	77 ^{mg} / _{kg}	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)
Methanol	67-56-1	PNEC	7,7 ^{mg} / _{kg}	aquatic organ- isms	marine sediment	short-term (single instance)
Methanol	67-56-1	PNEC	100 ^{mg} / _{kg}	terrestrial organ- isms	soil	short-term (single instance)
Acetic acid methyl ester	79-20-9	PNEC	0,12 ^{mg} / _l	aquatic organ- isms	freshwater	short-term (single instance)
Acetic acid methyl ester	79-20-9	PNEC	0,012 ^{mg} / _l	aquatic organ- isms	marine water	short-term (single instance)
Acetic acid methyl ester	79-20-9	PNEC	600 ^{mg} / _I	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)
Acetic acid methyl ester	79-20-9	PNEC	0,128 ^{mg} / kg	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)

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Relevant PNECs of components								
Name of sub- stance	CAS No	End- point	Threshol d level	Organism	Environmental compartment	Exposure time		
Acetic acid methyl ester	79-20-9	PNEC	0,013 ^{mg} / kg	aquatic organ- isms	marine sediment	short-term (single instance)		
Acetic acid methyl ester	79-20-9	PNEC	0,042 ^{mg} / kg	terrestrial organ- isms	soil	short-term (single instance)		

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection





Use safety goggle with side protection.

Skin protection





hand protection

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

type of material

NBR (Nitrile rubber)

material thickness

>0,11 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection





Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White).

Environmental exposure controls

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

Physical state solid

Form granulate

Colour whitish - whitish yellow

Odour faintly perceptible

Melting point/freezing point 150 – 230 °C

Boiling point or initial boiling point and boiling not determined

range

Flammability this material is combustible, but will not ignite

readily

Lower and upper explosion limit not determined Flash point not applicable

Auto-ignition temperature not determined

Decomposition temperature not relevant pH (value) 4,5 – 7 (20 °C)

Kinematic viscosity not relevant

Solubility(ies)

Water solubility not determined

Partition coefficient

Partition coefficient n-octanol/water (log value): this information is not available

Vapour pressure not determined

Density and/or relative density

Density not determined

Relative vapour density Information on this property is not available.

Bulk density $300 - 750 \text{ kg/m}^3$

Particle characteristics No data available.

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics: There is no additional information.

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SECTION 10: Stability and reactivity

10.1 Reactivity

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

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

Violent reaction with: strong oxidiser

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

This substance does not meet the criteria for classification.

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity of components

Name of substance	CAS No	Exposure route	Endpoint	Value	Species	
Methanol	67-56-1	inhalation: va- pour	LC50	131 ^{mg} / _l /4h	rat	
Methanol	67-56-1	oral	LD50	5.628 ^{mg} / _{kg}	rat	
Methanol	67-56-1	oral	LDLo	143 ^{mg} / _{kg}	human	
Methanol	67-56-1	dermal	LD50	15.800 ^{mg} / _{kg}	rabbit	
Acetic acid methyl ester	79-20-9	oral	LD50	6.482 ^{mg} / _{kg}	rat	
Acetic acid methyl ester	79-20-9	dermal	LD50	>2.000 ^{mg} / _{kg}	rat	

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

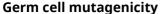
Shall not be classified as a respiratory or skin sensitiser.

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Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

If swallowed

Data are not available.

• If in eyes

Data are not available.

If inhaled

Data are not available.

• If on skin

Data are not available.

Other information

Health effects are not known. This information is based upon the present state of our knowledge.

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of \geq 0,1%.

11.3 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components								
Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time			
Methanol	67-56-1	LC50	15.400 ^{mg} / _l	fish	96 h			
Methanol	67-56-1	ErC50	22.000 ^{mg} / _l	algae	96 h			
Acetic acid methyl es- ter	79-20-9	LC50	≤350 ^{mg} / _I	fish	96 h			

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Shall not be classified as germ cell mutagenic.

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Aquatic toxicity (acute) of components								
Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time			
Acetic acid methyl es- ter	79-20-9	EC50	1.027 ^{mg} / _l	aquatic invertebrates	48 h			
Acetic acid methyl es-	79-20-9	ErC50	>120 ^{mg} / _l	algae	72 h			

Aquatic toxicity (chronic) of components Name of substance CAS No Endpoint Value Species Exposure time Acetic acid methyl ester 79-20-9 EC50 6.000 mg/_I microorganisms 16 h

12.2 Persistence and degradability

Degradabilit	Degradability of components								
Name of substance	CAS No	Process	Degrada- tion rate	Time	Method	Source			
Methanol	67-56-1	biotic/abiotic	99 %	30 d					
Methanol	67-56-1	oxygen deple- tion	69 %	5 d		ECHA			
Acetic acid methyl ester	79-20-9	biotic/abiotic	>70 %	19 d	geschlossene Flasche				
Acetic acid methyl ester	79-20-9	oxygen deple- tion	1 %	0 d		ECHA			

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components							
	Name of substance	CAS No	BCF	Log KOW	BOD5/COD		
	Methanol	67-56-1		-0,77			
	Acetic acid methyl ester	79-20-9		0,18			

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0.1\%$.

12.7 Other adverse effects

Data are not available.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

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. Completely emptied packages can be recycled.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1	UN number or ID number	not subject to transport regulations
------	------------------------	--------------------------------------

14.2 UN proper shipping name not assigned

14.3 Transport hazard class(es) none

14.4 Packing group not assigned

14.5 Environmental hazards non-environmentally hazardous acc. to the dan-

gerous goods regulátions

14.6 Special precautions for user

There is no additional information.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

International Maritime Dangerous Goods Code (IMDG) - Additional information Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Not subject to ICAO-IATA.

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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)

Seveso Directive

2012/	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								

Deco-Paint Directive

VOC content	0 %
-------------	-----

Industrial Emissions Directive (IED)

VOC content 0 %	ent 0 %	
-----------------	---------	--

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Water Framework Directive (WFD)

not listed

Regulation on the marketing and use of explosives precursors

not listed

Regulation on drug precursors

not listed

Regulation on substances that deplete the ozone layer (ODS)

not listed

Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

Regulation on persistent organic pollutants (POP)

not listed

National regulations(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

Restrictions according to GB REACH, Annex 17

not listed

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Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed (ACTIVE)
VN	NCI	substance is listed

Legend

AIIC

Australian Inventory of Industrial Chemicals List of Existing and New Chemical Substances (CSCL-ENCS) CSCL-ENCS

DSL IECSC INSQ

Domestic Substances List (DSL)
Inventory of Existing Chemical Substances Produced or Imported in China
National Inventory of Chemical Substances

National Inventory of Chemicals Japananees
Korea Existing Chemicals Inventory
National Chemical Inventory
New Zealand Inventory of Chemicals
Philippine Inventory of Chemicals and Chemical Substances (PICCS)
Taiwan Chemical Substance Inventory
Toxic Substance Control Act

Toxic Substance Control Act

15.2 Chemical safety assessment

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

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
15.1		National inventories: change in the listing (table)	yes

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Abbreviations and acronyms



Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
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)
ED	Endocrine disruptor
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
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
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
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)

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Abbr.	Descriptions of used abbreviations
STEL	Short-term exposure limit
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Disclaimer

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

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