

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

· **1.1 Product identifier**

· **Trade name:** Polyvinyl Alcohol (PVA) 4-88

· **Article number:** 257190

· **Registration number**

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration, the registration is envisaged for a later registration deadline or it is a mixture.

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

No further relevant information available.

· **Application of the substance / the mixture**

Biochemistry  
 Laboratory chemical

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

AppliChem GmbH  
 Ottoweg 4  
 D-64291 Darmstadt

Tel.: +49 (0)6151 93570  
 Fax.: +49 (0)6151 935711  
 msds@applichem.com

· **Further information obtainable from:** Dept. Compliance

· **1.4 Emergency telephone number:** +49(0)6151 93570 (Inside normal business hours)

## SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

The product is not classified, according to the CLP regulation.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **Additional information:**

Safety data sheet available on request.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 67-56-1	methanol	>2.5-≤3%
EINECS: 200-659-6	Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3,	
Reg.nr.: 01-2119433307-44-XXXX	H311; Acute Tox. 3, H331; STOT SE 1, H370	

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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

## SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth.  
make victim drink water (maximum of 2 drinking glasses)  
If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**  
Irritation to eyes, skin and mucous membrane  
Coughing
- **4.3 Indication of any immediate medical attention and special treatment needed**  
Treat symptomatically and supportively.

## SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Water, CO<sub>2</sub>, foam, powder.
- **5.2 Special hazards arising from the substance or mixture**  
Development of hazardous combustion gases or vapours possible in the event of fire.  
In case of fire, the following can be released:  
carbon oxides (CO, CO<sub>2</sub>).  
Ambient fire may liberate hazardous vapours.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Avoid formation of dust.  
Do not inhale dust.  
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Avoid generation of dusts.  
Clean up affected area.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Provide suction extractors if dust is formed.

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- **Information about fire - and explosion protection:**  
Protect against electrostatic charges.  
Dust can combine with air to form an explosive mixture.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container sealed.
- **Recommended storage temperature:** +15 - +25°C
- **Storage class:** 11
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

### · Ingredients with limit values that require monitoring at the workplace:

#### 67-56-1 methanol

WEL	Short-term value: 333 mg/m <sup>3</sup> , 250 ppm
	Long-term value: 266 mg/m <sup>3</sup> , 200 ppm
	Sk

### · DNELs

#### 67-56-1 methanol

Oral	Acute - systemic effects, general population	8 mg/kg
	Long-term - systemic effects, general population	8 mg/kg
Dermal	Acute - systemic effects, worker	40 mg/kg
	Long-term - systemic effects, worker	40 mg/kg
Inhalative	Acute - systemic effects, general population	8 mg/kg
	Long term - systemic effects, general population	8 mg/kg
	Acute - local effects, worker	260 mg/m <sup>3</sup>
	Acute - systemic effects, worker	260 mg/m <sup>3</sup>
	Long-term - systemic effects, worker	260 mg/m <sup>3</sup>
	Long-term - local effects, worker	260 mg/m <sup>3</sup>
	Acute - systemic effects, general population	50 mg/m <sup>3</sup>
	Acute - local effects, general population	50 mg/m <sup>3</sup>
	Long-term - systemic effects, general population	50 mg/m <sup>3</sup>
	Long-term - local effects, general population	50 mg/m <sup>3</sup>

### · PNECs

#### 67-56-1 methanol

Aquatic compartment - freshwater	154 mg/L
Aquatic compartment - marine water	15.4 mg/L
Aquatic compartment - water, intermittent releases	1,540 mg/L
Aquatic compartment - sediment in freshwater	570.4 mg/kg
Terrestrial compartment - soil	23.5 mg/kg
Sewage treatment plant	100 mg/L

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.

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Wash hands before breaks and at the end of work.

Change contaminated clothing.

• **Respiratory protection:**

Filter P2

Required when dusts are generated.

• **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

• **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• **For the permanent contact gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.11$  mm

Value for the permeation: Level  $\geq 480$  min

• **As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.11$  mm

Value for the permeation: Level  $\geq 480$  min

• **Eye protection:** Safety glasses

• **Body protection:**

Protective work clothing

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

## SECTION 9: Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**

• **General Information**

• **Appearance:**

Form: Granulate

Colour: White

• **Odour:** Odourless

• **Odour threshold:** Not determined.

• **pH-value at 20 °C:** 4.5-7

• **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Undetermined.

• **Flash point:** 93 °C

• **Flammability (solid, gas):** Not determined.

• **Decomposition temperature:** Not determined.

• **Auto-ignition temperature:** Product is not selfigniting.

• **Explosive properties:** Product does not present an explosion hazard.

• **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

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· Vapour pressure:	Not applicable.
· Density:	Not determined.
· Bulk density:	400-600 kg/m <sup>3</sup>
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water:	Soluble.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
Organic solvents:	2.9 %
· 9.2 Other information	No further relevant information available.

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No dangerous reactions known.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Strong heating
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Risk of dust explosion if enriched with fine dust in the presence of air.
- **10.5 Incompatible materials:**  
strong oxidants  
strong acids
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**

Components	Type	Value	Species
<b>67-56-1 methanol</b>			
Oral	LD50	5,628 mg/kg	(rat)
Dermal	LD50	17,100 mg/kg	(rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **After inhalation:** No irritant effect.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

### · Repeated dose toxicity

<b>67-56-1 methanol</b>			
Inhalative	NOAEL	1.06 mg/l	(rat)

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.

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· **Reproductive toxicity**

**67-56-1 methanol**

NOAEL (Fertility) 0.13 mg/kg bw/day (rat)

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

- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**

Type of test	Effective concentration	Method	Assessment
<b>67-56-1 methanol</b>			
EC50/48 h	>10,000 mg/l	(daphnia magna)	
EC50/96 h	22,000 mg/l	(Algae)	
LC50/96 h	15,400 mg/l	(fish)	

**67-56-1 methanol**

EC50/48 h	>10,000 mg/l	(daphnia magna)
EC50/96 h	22,000 mg/l	(Algae)
LC50/96 h	15,400 mg/l	(fish)

- **12.2 Persistence and degradability**  
The surfactants contained in the product correspond to the legislation on the environmental compatibility of detergents and are biodegradable.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow to enter waters, waste water, or soil.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Chemicals must be disposed of in compliance with the respective national regulations.
- **Uncleaned packaging:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## SECTION 14: Transport information

- |  |      |
|--|------|
| · <b>14.1 UN-Number</b>                  |      |
| · <b>ADR, ADN, IMDG, IATA</b>            | Void |
| · <b>14.2 UN proper shipping name</b>    |      |
| · <b>ADR, ADN, IMDG, IATA</b>            | Void |
| · <b>14.3 Transport hazard class(es)</b> |      |
| · <b>ADR, ADN, IMDG, IATA</b>            |      |
| · <b>Class</b>                           | Void |

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· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b> · <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>UN "Model Regulation":</b>	Void

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Directive 2012/18/EU**
  - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
  - **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 69
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
  - H225 Highly flammable liquid and vapour.
  - H301 Toxic if swallowed.
  - H311 Toxic in contact with skin.
  - H331 Toxic if inhaled.
  - H370 Causes damage to organs.
- **Department issuing SDS:** Dept. Compliance
- **Abbreviations and acronyms:**
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organisation
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - DNEL: Derived No-Effect Level (REACH)
  - PNEC: Predicted No-Effect Concentration (REACH)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 2: Flammable liquids – Category 2
  - Acute Tox. 3: Acute toxicity – Category 3
  - STOT SE 1: Specific target organ toxicity (single exposure) – Category 1