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

1.1 Product identifier

Identification of the substance: Polyvinylpyrrolidone
Article number: CP15
Registration number (REACH): This information is not available.
EC number: none
CAS number: 9003-39-8

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

Identified uses:
- laboratory chemical
- laboratory and analytical use

1.3 Details of the supplier of the safety data sheet

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

Competent person responsible for the safety data sheet: Department Health, Safety and Environment
E-mail (competent person): sicherheit@carlroth.de

1.4 Emergency telephone number

Emergency information service: Poison Centre Munich: +49/(0)89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)
This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)
Not required

Signal word: not required

2.3 Other hazards

There is no additional information.
SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance: Polyvinylpyrrolidone
CAS number: 9003-39-8
Molecular formula: \((C_6H_9NO)_n\)
Molar mass: \(~360.000 \text{ g/mol}\)

SECTION 4: First aid measures

4.1 Description of first aid measures

**General notes**
Take off contaminated clothing.

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

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

**Following ingestion**
Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms and effects are not known to date

4.3 Indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 Extinguishing media

**Suitable extinguishing media**
Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO2)

**Unsuitable extinguishing media**
water jet

5.2 Special hazards arising from the substance or mixture
Combustible.

**Hazardous combustion products**
In case of fire may be liberated: nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO2)

### 5.3 Advice for firefighters
Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel**
Do not breathe dust.

### 6.2 Environmental precautions
Keep away from drains, surface and ground water.

### 6.3 Methods and material for containment and cleaning up

**Advises on how to contain a spill**
Covering of drains.

**Advises on how to clean up a spill**
Take up mechanically.

**Other information relating to spills and releases**
Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling
Avoid dust formation.

**Advice on general occupational hygiene**
Wash hands before breaks and after work.

### 7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed. 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)

Data are not available.

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.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state: solid (powder)
- Colour: white - light beige
- Odour: faintly perceptible
- Odour threshold: No data available

Other physical and chemical parameters

- pH (value): 4 – 7 (water: 50 mg/cm³, 20 °C)
- Melting point/freezing point: 130 °C
- Initial boiling point and boiling range: This information is not available.
- Flash point: not applicable
- Evaporation rate: no data available
- Flammability (solid, gas): These information are not available

Explosive limits

- • lower explosion limit (LEL): (25 g/m³)
- • upper explosion limit (UEL): this information is not available
- Explosion limits of dust clouds: these information are not available
- • lower explosion limit (LEL): 25 g/m³
- Vapour pressure: This information is not available.
- Density: 1,2 g/cm³ at 20 °C
- Vapour density: This information is not available.
- Relative density: Information on this property is not available.

Solubility(ies)

- Water solubility: soluble
- Partition coefficient
- n-octanol/water (log KOW): This information is not available.
- Auto-ignition temperature: >400 °C
- Decomposition temperature: >130 °C
- Viscosity: not relevant (solid matter)
- Explosive properties: Shall not be classified as explosive
- Oxidising properties: none

9.2 Other information

There is no additional information.
SECTION 10: Stability and reactivity

10.1 Reactivity
Dust explosibility.

10.2 Chemical stability
Hygroscopic solid.

10.3 Possibility of hazardous reactions
Violent reaction with: Strong alkali

10.4 Conditions to avoid
Protect from moisture. Keep away from heat. Decomposition takes place from temperatures above: >130 °C.

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

Acute toxicity
Shall not be classified as acutely toxic.

<table>
<thead>
<tr>
<th>Exposure route</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>oral</td>
<td>LD50</td>
<td>&gt;2.000  mg/kg</td>
<td>rat</td>
<td>TOXNET</td>
</tr>
</tbody>
</table>

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.

Summary of evaluation of the CMR properties
Shall not be classified as germ cell mutagenic, carcinogenic nor 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

Inhalation of dust may cause irritation of the respiratory system

If on skin

- data are not available

Other information

- None

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>&gt;10,000 mg/l</td>
<td>orfe (Leuciscus idus)</td>
<td>96 h</td>
</tr>
</tbody>
</table>

12.2 Process of degradability

Theoretical Oxygen Demand with nitrification: Theoretical Oxygen Demand: Theoretical Carbon Dioxide:

12.3 Bioaccumulative potential

- Data are not available.

12.4 Mobility in soil

- Data are not available.

12.5 Results of PBT and vPvB assessment

- Data are not available.

12.6 Other adverse effects

- Data are not available.

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.

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.

SECTION 14: Transport information

14.1 UN number (not subject to transport regulations)
14.2 UN proper shipping name not relevant
14.3 Transport hazard class(es) not relevant
   Class -
14.4 Packing group not relevant
14.5 Environmental hazards none (non-environmentally hazardous acc. to the dangerous goods regulations)

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)
• Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)
  Not listed.
• Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)
  Not listed.
• Regulation 850/2004/EC on persistent organic pollutants (POP)
  Not listed.
• Restrictions according to REACH, Annex XVII
  Not listed
• List of substances subject to authorisation (REACH, Annex XIV)
  Not listed
• Seveso Directive

<table>
<thead>
<tr>
<th>2012/18/EU (Seveso III)</th>
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<tbody>
<tr>
<td>No</td>
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<td></td>
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</tbody>
</table>

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

not listed

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

National inventories

<table>
<thead>
<tr>
<th>Country</th>
<th>National inventories</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU</td>
<td>AICS</td>
<td>substance is listed</td>
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<tr>
<td>CA</td>
<td>DSL</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CN</td>
<td>IECSC</td>
<td>substance is listed</td>
</tr>
<tr>
<td>JP</td>
<td>CSCL-ENCS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>KR</td>
<td>KECI</td>
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</tr>
<tr>
<td>MX</td>
<td>INSQ</td>
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<tr>
<td>PH</td>
<td>PICCS</td>
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<tr>
<td>TW</td>
<td>TCSI</td>
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</tr>
<tr>
<td>US</td>
<td>TSCA</td>
<td>substance is listed</td>
</tr>
</tbody>
</table>

Legend

AICS: Australian Inventory of Chemical Substances
CSCL-ENCS: List of Existing and New Chemical Substances (CSCL-ENCS)
DSL: Domestic Substances List (DSL)
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
INSQ: National Inventory of Chemical Substances
KECI: Korea Existing Chemicals Inventory
NZIoC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
TCSI: Taiwan Chemical Substance Inventory
TSCA: Toxic Substance Control Act

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.
SECTION 16: Other information

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>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)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>CMR</td>
<td>Carcinogenic, Mutagenic or toxic for Reproduction</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of ”Marine Pollutant”)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>vPvB</td>
<td>very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

Key literature references and sources for data
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

List of relevant phrases (code and full text as stated in chapter 2 and 3)
not relevant.

Disclaimer
The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.