SECTION 1. Product and company identification

Chemical type: Substance
Substance name: PVP (Polyvinylpyrolidone)
CAS No.: 9003-39-8
Product code: RC-086
Formula: \((C_6H_9NO)_n\)

Synonyms:

Company identification: G-Biosciences/ Geno Technology, Inc.
9800 Page Avenue
St. Louis, MO 63312-1429, USA
Tel. 1-800-628-7730
http://www.GBiosciences.com

Emergency number: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2. Hazards identification

2.1. Emergency Overview

Physical state: Solid
Appearance: Solid. Amorphous powder
Colour: Off-white to light yellow
Odour: Characteristic odour. Mild odour

PVP (Polyvinylpyrolidone)(9003-39-8)

IARC group: 3 - Not Classifiable

2.2. OSHA Regulatory Status

No additional information available

2.3. Potential health effects

Symptoms/injuries after ingestion: AFTER ABSORPTION OF HIGH QUANTITIES: Diarrhoea.

No additional information available

SECTION 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVP (Polyvinylpyrolidone)</td>
<td>9003-39-8</td>
<td>100</td>
</tr>
</tbody>
</table>
4.1. First aid procedures

First-aid measures general:

First-aid measures after inhalation:
Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact:
Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

First-aid measures after eye contact:
Rinse with water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion:
Rinse mouth with water. Consult a doctor/medical service if you feel unwell. Victim is fully conscious: immediately induce vomiting. Ingestion of large quantities: immediately to hospital. Call Poison Information Centre (www.big.be/antigif.htm).

4.2. Note to physicians
No additional information available

SECTION: 5. Firefighting measures

5.1. Flammable properties

Fire hazard:
DIRECT FIRE HAZARD. Not easily combustible. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD. Temperature above flashpoint: higher fire/explosion hazard. May build up electrostatic charges: risk of ignition.

Explosion hazard:
DIRECT EXPLOSION HAZARD. Its dust is explosive with air. INDIRECT EXPLOSION HAZARD. Dust cloud can be ignited by a spark.

Reactivity:
On heating/burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide) and formation of small quantities of (hydrogen cyanide).

5.1. Extinguishing media
Suitable extinguishing media:

5.3. Protection for firefighters

Firefighting instructions:
Dilute toxic gases with water spray.

Protection during firefighting:

SECTION: 6. Accidental release measures

6.1. Personal precautions

6.1.1. For non-emergency personnel

Protective equipment:

Emergency procedures:
Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames.

6.1.2. For emergency responders
No additional information available

6.2. Environmental precautions
No additional information available

6.3. Methods for containment

For containment:
Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Provide equipment/receptacles with earthing. Powdered form: no compressed air for pumping over spills.

6.4. Methods for clean up

Methods for cleaning up:
Stop dust cloud by humidifying. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. Carefully collect the spill/leftovers. See "Material-handling" for suitable container materials. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.5. Other information
No additional information available

6.6. Spill or leak statements by type of chemical
No additional information available
PVP (Polyvinylpyrolidone)  
Safety Data Sheet

SECTION: 7. Handling and storage

7.1. Handling

Precautions for safe handling:

7.2. Storage

Storage temperature: 20 °C
Heat-ignition:
KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Prohibitions on mixed storage:
KEEP SUBSTANCE AWAY FROM: oxidizing agents. reducing agents.
Storage area:
Store in a dry area. Store in a dark area. Provide the tank with earthing. Keep only in the original container. Meet the legal requirements.
Special rules on packaging:
SPECIAL REQUIREMENTS: closing. watertight. dry. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials:
SUITABLE MATERIAL: synthetic material.

SECTION: 8. Exposure controls/personal protection

8.1. Exposure guidelines

PVP (Polyvinylpyrolidone) (9003-39-8)
ACGIH ACGIH TWA (mg/m³) 3 R/10 I mg/m³

8.2. Engineering controls

No additional information available

8.3. Personal protective equipment (PPE)

Materials for protective clothing:
GIVE GOOD RESISTANCE: synthetic material. rubber.
Hand protection:
Gloves.
Eye protection:
Safety glasses. In case of dust production: protective goggles.
Skin and body protection:
Protective clothing.
Respiratory protection:
Dust formation: dust mask.

SECTION: 9. Physical and chemical properties

Physical state:
Solid
Appearance:
Solid. Amorphous powder.
Colour:
Off-white to light yellow.
Odour:
Characteristic odour. Mild odour.
Odour threshold:
No data available
pH:
3 - 7
pH solution:
5 %
Melting point:
130 °C
Solidification point:
No data available
Boiling point:
No data available
Flash point:
> 250 °C
Relative evaporation rate (butylacetate=1):
0
Flammability (solid, gas):
No data available
Explosive limits:
No data available
Vapour pressure:
< 0.1 hPa (20 °C)
Relative vapour density at 20 °C:
No data available
Relative density:
1.2 - 1.3
Density:
1230 - 1290 kg/m³
Solubility:
Soluble in water. Soluble in ethanol. Soluble in chloroform. Soluble in chlorinated hydrocarbons.
Water: > 30 g/100ml
Log Pow:
No data available
Self ignition temperature:
420 °C
Decomposition temperature:
No data available
Viscosity:
No data available
Explosive properties:
No data available
Oxidising properties:
No data available
SECTION: 10. Stability and reactivity

10.1. Chemical stability

On heating/burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide) and formation of small quantities of (hydrogen cyanide).

Stable under normal conditions. Hygroscopic.

10.2. Conditions to avoid

No additional information available

10.3. Incompatible materials

No additional information available

10.4. Hazardous decomposition products

No additional information available

10.5. Possibility of hazardous reactions

No additional information available

SECTION: 11. Toxicological information

Information on toxicological effects

Acute toxicity : Not classified

<table>
<thead>
<tr>
<th>PVP (Polyvinylpyrrolidone) (9003-39-8)</th>
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<tbody>
<tr>
<td>LD50 oral rat</td>
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<tr>
<td>LD50 dermal rat</td>
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Skin corrosion/irritation : Not classified

| pH: 3 - 7 |

Serious eye damage/irritation : Not classified

| pH: 3 - 7 |

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION: 12. Ecological information

12.1 Ecotoxicity


<table>
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<td>LC50 fishes 1</td>
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</table>

12.2. Persistence and degradability

<table>
<thead>
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<th>PVP (Polyvinylpyrrolidone)(9003-39-8)</th>
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</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
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</tbody>
</table>

12.3. Bioaccumulation/Accumulation

<table>
<thead>
<tr>
<th>PVP (Polyvinylpyrrolidone)(9003-39-8)</th>
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</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

12.4. Mobility in environmental media

No additional information available

12.6. Other adverse effects

No additional information available

SECTION: 13. Disposal considerations

13.1. Waste treatment methods

SECTION: 14. Transport information

14.1. Basic shipping description
No additional information available

14.2 Additional information
Other information : No supplementary information available.
State during transport (ADR-RID) : Rail and road transport: not subject to ADR-RID.

Overland transport
No additional information available

Transport by sea
No additional information available

Air transport
No additional information available

SECTION: 15. Regulatory information

15.1. US Federal regulations
No additional information available

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

15.2.2. National regulations
No additional information available

15.3. US State regulations
No additional information available

SECTION: 16. Other information

HMIS III Rating
No additional information available

SDS US (ANSI) GBIosciences