1. Product and Company Identification

<table>
<thead>
<tr>
<th>Company</th>
<th>24 Hour Emergency Response Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASF CORPORATION</td>
<td>CHEMTREC: 1-800-424-9300</td>
</tr>
<tr>
<td>100 Campus Drive</td>
<td>BASF HOTLINE: 1-800-832-HELP</td>
</tr>
<tr>
<td>Florham Park, NJ 07932, USA</td>
<td></td>
</tr>
</tbody>
</table>

2. Hazards Identification

**Emergency overview**

CAUTION:
CAN FORM EXPLOSIVE DUST-AIR MIXTURES.
Avoid dust formation.
Avoid inhalation of dusts.
Use with local exhaust ventilation.
Wear chemical resistant protective gloves.
Wear safety glasses with side-shields.
Wear protective clothing.
Avoid all sources of ignition: heat, sparks, open flame.

State of matter: solid
Colour: white to slightly yellow
Odour: faint specific odour

**Potential health effects**

**Primary routes of exposure:**
Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

**Acute toxicity:**
Virtually nontoxic after a single ingestion.

**Irritation / corrosion:**
Not irritating to the skin. Not irritating to the eyes.

**Sensitization:**
Skin sensitizing effects were not observed in animal studies.

**Chronic toxicity:**

**Teratogenicity:** No indications of a developmental toxic / teratogenic effect were seen in animal studies.
Genotoxicity: No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in studies with mammals.

Signs and symptoms of overexposure:
No significant symptoms are expected due to the non-classification of the product.

Potential environmental effects

Aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>9003-39-8</td>
<td>80.0 - 100.0 %</td>
<td>Polyvinylpyrrolidone</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>3.0 - 7.0 %</td>
<td>Water</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

General advice:
Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air. Assist in breathing if necessary. Seek medical attention if necessary.

If on skin:
Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention.

If swallowed:
Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention.

Note to physician
Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Flash point: not determined
Autoignition: approx. 420 °C (DIN 51794)
Upper explosion limit: not determined
Flammability: not determined

Suitable extinguishing media: water spray

Hazards during fire-fighting:
carbon dioxide, cyanides, nitrogen oxides
The substances/groups of substances mentioned can be released in case of fire.

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.
6. Accidental release measures

**Personal precautions:**
Avoid dust formation.

Wear appropriate respiratory protection. Use personal protective clothing. Ensure adequate ventilation.

**Environmental precautions:**
Do not discharge into drains/surface waters/groundwater.

**Cleanup:**
Dispose of absorbed material in accordance with regulations. Avoid dust formation.
For small amounts: Sweep/shovel up.
For large amounts: Sweep/shovel up.

7. Handling and Storage

**Handling**

**General advice:**
Avoid dust formation. Take precautionary measures against static discharges.

**Protection against fire and explosion:**
The product is capable of dust explosion. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Avoid dust formation.

Avoid whirling up the material/product because of the danger of dust explosion.

**Storage**

**General advice:**
Keep container tightly closed in a cool, well-ventilated place.

8. Exposure Controls and Personal Protection

**Advice on system design:**
Provide local exhaust ventilation to control dusts/mists.

**Personal protective equipment**

**Respiratory protection:**
Breathing protection if dusts are formed. Wear a NIOSH-certified (or equivalent) particulate respirator.

**Hand protection:**
Wear chemical resistant protective gloves., Consult with glove manufacturer for testing data.

**Eye protection:**
Safety glasses with side-shields.

**Body protection:**
Body protection must be chosen based on level of activity and exposure.
General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Wear protective clothing as necessary to minimize contact. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work.

9. Physical and Chemical Properties

Form: powder
Odour: faint specific odour
Colour: white to slightly yellow
pH value: approx. 3 - 7 (100 g/l, 20 °C)
melting point: > 140 °C
Boiling point: not applicable
Density: 1.2 g/cm³ (20 °C)
Relative density: Study does not need to be conducted.
Bulk density: approx. 200 kg/m³
Vapour density: not relevant
Partitioning coefficient n-octanol/water (log Pow): not determined
Viscosity, dynamic: not determined
Viscosity, kinematic: not determined
Particle size: 69 µm
Solubility in water: > 300 g/l (20 °C) fully soluble
Solubility (qualitative): soluble
solvent(s): organic solvents,

10. Stability and Reactivity

Dust explosivity characteristics:
Kst: 80 m.bar/s

Dust explosion class:
Dust explosion class 1 (Kst-value >0 up to 200 bar m s⁻¹) (St 1)

Minimum ignition energy:
10 - 30 mJ, Grain size distribution: 69 µm (VDI 2263, sheet 1, 2.5)

Conditions to avoid:
Avoid dust formation. Avoid electro-static charge. Avoid all sources of ignition: heat, sparks, open flame.

Substances to avoid:
strong alkalies

Hazardous reactions:
No hazardous reactions when stored and handled according to instructions. Dust explosion hazard.

Decomposition products:
Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
>= 130 °C

Corrosion to metals:
Corrosive effects to metal are not anticipated.

Oxidizing properties:
not fire-propagating
11. Toxicological information

Acute toxicity

Oral:
Type of value: LD50
Species: rat
Value: > 10,000 mg/kg (BASF-Test)

Irritation / corrosion

Skin:
Species: rabbit
Result: non-irritant
Method: BASF-Test

Eye:
Species: rabbit
Result: non-irritant
Method: BASF-Test

12. Ecological Information

Fish
Acute:
OECD Guideline 203 static
Brachydanio rerio/LC50 (96 h): > 10,000 mg/l

Aquatic invertebrates
Acute:
Directive 79/831/EEC static
Daphnia magna/EC50 (48 h): > 100 mg/l

Aquatic plants
Toxicity to aquatic plants:
OECD Guideline 201 static
green algae/EC50 (72 h): > 100 mg/l

Degradability / Persistence
Biological / Abiological Degradation
Test method: OECD Guideline 302 B (aerobic), activated sludge, adapted
Method of analysis: DOC reduction
Degree of elimination: approx. 20 - 30 % (15 d)
Evaluation: Poorly eliminated from water.

Bioaccumulation
Based on its structural properties, the polymer is not biologically available. Accumulation in organisms is not to be expected.

13. Disposal considerations

Waste disposal of substance:
Safety Data Sheet
Kollidon® VA 64 Fine

Do not discharge into drains/surface waters/groundwater. Dispose of in accordance with national, state and local regulations.

Container disposal:
Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed
Pharma TSCA, US released / exempt

OSHA hazard category: Not hazardous;

EPCRA 311/312 (Hazard categories): Not hazardous;

<table>
<thead>
<tr>
<th>CERCLA RQ</th>
<th>CAS Number</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 LBS</td>
<td>7761-88-8</td>
<td>silver nitrate</td>
</tr>
<tr>
<td>5000 LBS</td>
<td>108-05-4</td>
<td>vinyl acetate</td>
</tr>
</tbody>
</table>

16. Other Information

NFPA Hazard codes:
Health: 1  Fire: 1  Reactivity: 0  Special: none

HMIS III rating
Health: 1  Flammability: 1  Physical hazard: 0

NFPA and HMIS use a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates extreme danger. Although similar, the two rating systems are intended for different purposes, and use different criteria. The NFPA system was developed to provide an
on-the-spot alert to the hazards of a material, and their severity, to emergency responders. The HMIS system was designed to communicate workplace hazard information to employees who handle hazardous chemicals.

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MSDS Prepared by:
BASF NA Product Regulations
msds@basf.com
MSDS Prepared on: 2012/04/19

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END OF DATA SHEET