1 Identification

- Product identifier
  - Trade name: JOWAPUR 1K PUR-DISPERSION 150.91
  - Application of the substance / the mixture: Dispersion glue

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Jowat Corporation
    6058 Lois Lane
    Archdale, NC 27263
    Phone: 336-434-9000
    Fax: 336-434-9019
    info@jowat.com
  - Department issuing SDS:
    Environmental management
    Ellen Lange / Tina Friedrich / Jan-Peter Boelcke
    Fon +49 5231 749 218 / 270 / 211
    e-mail: umweltmanagement@jowat.de
  - Information provided by department:
    Jowat Corporation
    5608 Uwharrie Rd.
    Archdale, NC 27263
    P.O.Box 1368
    High Point, NC 27261
    Tel.: +1 336 434-9000
    Fax: +1 336 434-9019
    E-Mail: info@jowat.com
  - Emergency telephone number: 1 800 424 9300 (Chemtrec 24 hours service)

2 Hazard(s) identification

- Classification of the substance or mixture
  The product is not classified according to the Globally Harmonized System (GHS).

- Label elements
  - GHS label elements: Void
    - Hazard pictograms: Void
    - Signal word: Void
    - Hazard statements: Void

- Classification system
  - NFPA ratings (scale 0-4)
    Health = 0
    Fire = 0
    Reactivity = 0
  - HMIS ratings (scale 0-4)
    HEALTH Health = 0
    FIRE Flammability = 0
    REACTIVITY Reactivity = 0

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
  - Description:
    aqueous polymer emulsion
    Polyurethane resin

(Contd. on page 2)
Trade name: JOWAPUR 1K PUR-DISPERSION 150.91

4 First-aid measures

- Description of first aid measures
  - General information: No special measures required.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly. Generally the product does not irritate the skin.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: If symptoms persist consult physician.

- Information for physician
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents: Use fire fighting measures that suit the environment.

- Special hazards arising from the substance or mixture
  - Under certain fire conditions, traces of other toxic gases cannot be excluded.

- Advice for firefighters
  - Protective equipment: Do not inhale explosion gases or combustion gases.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Not required.

- Environmental precautions:
  - Do not allow product to reach sewer system or open water. Prevent from spreading (e.g. by damming-in or oil barriers).

- Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, general-purpose binders, sawdust).

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.

Protective Action Criteria for Chemicals

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 acetone</td>
<td>200 ppm</td>
</tr>
<tr>
<td>13463-67-7 titanium dioxide</td>
<td>30 mg/m³</td>
</tr>
<tr>
<td>68439-49-6 Alcohols, C16-18, ethoxylated</td>
<td>3.8 mg/m³</td>
</tr>
<tr>
<td>111-46-6 2,2'-oxybisethanol</td>
<td>6.9 ppm</td>
</tr>
<tr>
<td>64-17-5 ethanole</td>
<td>1,800 ppm</td>
</tr>
<tr>
<td>57-55-6 propane-1,2-diol</td>
<td>30 mg/m³</td>
</tr>
<tr>
<td>7631-99-4 sodium nitrate, containing in the dry state more than 16.3 per cent by weight of nitrogen</td>
<td>4.1 mg/m³</td>
</tr>
<tr>
<td>584-84-9 4-methyl-m-phenylene diisocyanate</td>
<td>0.020 ppm</td>
</tr>
<tr>
<td>50-00-0 formaldehyde</td>
<td>0.90 ppm</td>
</tr>
<tr>
<td>88-12-0 1-vinyl-2-pyrrolidone</td>
<td>0.15 ppm</td>
</tr>
<tr>
<td>108-05-4 vinyl acetate</td>
<td>6.7 ppm</td>
</tr>
<tr>
<td>1080-33-0 dibutyltin di(acetate)</td>
<td>0.59 mg/m³</td>
</tr>
<tr>
<td>140-88-5 ethyl acrylate</td>
<td>8.3 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 acetone</td>
<td>3200* ppm</td>
</tr>
</tbody>
</table>
### Trade name: JOWAPUR 1K PUR-DISPERSION 150.91

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Name</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>13463-67-7</td>
<td>titanium dioxide</td>
<td>330 mg/m³</td>
</tr>
<tr>
<td>68439-49-6</td>
<td>Alcohols, C16-18, ethoxylated</td>
<td>42 mg/m³</td>
</tr>
<tr>
<td>111-46-6</td>
<td>2,2'-oxybisethanol</td>
<td>140 ppm</td>
</tr>
<tr>
<td>64-17-5</td>
<td>ethanole</td>
<td>3300 ppm</td>
</tr>
<tr>
<td>57-55-6</td>
<td>propane-1,2-diol</td>
<td>1,300 mg/m³</td>
</tr>
<tr>
<td>7631-99-4</td>
<td>sodium nitrate, containing in the dry state more than 16,3 per cent by weight of nitrogen</td>
<td>45 mg/m³</td>
</tr>
<tr>
<td>584-84-9</td>
<td>4-methyl-m-phenylene diisocyanate</td>
<td>0.083 ppm</td>
</tr>
<tr>
<td>50-00-0</td>
<td>formaldehyde</td>
<td>14 ppm</td>
</tr>
<tr>
<td>88-12-0</td>
<td>1-vinyl-2-pyrrolidone</td>
<td>6.3 ppm</td>
</tr>
<tr>
<td>108-05-4</td>
<td>vinyl acetate</td>
<td>36 ppm</td>
</tr>
<tr>
<td>1087-33-0</td>
<td>dibutyltin di(acetate)</td>
<td>6.5 mg/m³</td>
</tr>
<tr>
<td>140-88-5</td>
<td>ethyl acrylate</td>
<td>36 ppm</td>
</tr>
</tbody>
</table>

**PAC-3:**
- 67-64-1 acetone 5700 ppm
- 13463-67-7 titanium dioxide 2,000 mg/m³
- 68439-49-6 Alcohols, C16-18, ethoxylated 250 mg/m³
- 111-46-6 2,2'-oxybisethanol 860 ppm
- 64-17-5 ethanole 15000 ppm
- 57-55-6 propane-1,2-diol 7,900 mg/m³
- 7631-99-4 sodium nitrate, containing in the dry state more than 16,3 per cent by weight of nitrogen 270 mg/m³
- 584-84-9 4-methyl-m-phenylene diisocyanate 0.51 ppm
- 50-00-0 formaldehyde 56 ppm
- 88-12-0 1-vinyl-2-pyrrolidone 31 ppm
- 108-05-4 vinyl acetate 180 ppm
- 1087-33-0 dibutyltin di(acetate) 39 mg/m³
- 140-88-5 ethyl acrylate 240 ppm

### 7 Handling and storage

- **Handling**
  - **Precautions for safe handling**
    Store in cool, dry place in tightly closed containers.
    Prevent formation of aerosols.
  - **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage**
    - **Requirements to be met by storage facilities and containers:** No special requirements.
    - **Information concerning mixed product storage facilities:** Not required.
  - **Further information on storage conditions:**
    Protect from frost.
    Keep container tightly sealed.
  - **Storage class** 12
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Control parameters**
  - **Components with limit values that require monitoring in the workplace:**
    The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information:
The lists that were valid at the date of compilation of this SDS were used as basis.

Exposure controls

Personal protective equipment

General protection and hygiene precautions
The standard precautionary measures for handling chemicals should be observed. Wash hands before breaks and at the end of work.

Breathing equipment:
Has to be worn only if no adequate extraction system is operating when sprayed.
Filter A/P2
Not necessary if room is well-ventilated.

Protection of hands: Not required.

Material of gloves Plastic gloves
Penetration time of glove material
Please contact the glove manufacturer for the exact time of penetration/resistance level and observe this limit.

In case of permanent contact in work areas where the risk of injury is low (e.g. labs) gloves made of the following material are suitable:
Plastic gloves

In case of permanent contact, gloves made of the following materials are suitable:
Plastic gloves

The following materials are unsuitable for gloves:
Leather gloves
Strong gloves

Eye protection: Goggles recommended during refilling an spraying.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:
Form: Fluid
Color: White
Odor: Characteristic
Odor threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: undetermined
Boiling point/Boiling range: 100 °C (212 °F)

Flash point: Not applicable

Flammability (solid, gaseous) Not applicable.

Ignition temperature: >550 °C (>1022 °F)

Decomposition temperature: Not determined.

Self-igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:
Lower: Not determined.
Upper: Not determined.

Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)

Density at 20 °C (68 °F): 1.08 g/cm³ (9.013 lbs/gal)
Relative density Not determined.
Vapor density Not determined.
Trade name: JOWAPUR 1K PUR-DISPERSION 150.91

44.3.0

· Evaporation rate Not determined.
· Solubility in / Miscibility with
  · Water: Fully miscible
· Partition coefficient (n-octanol/water): Not determined.
· Viscosity:
  · dynamic: Not determined.
  · kinematic: Not determined.
· Solvent content:
  · Organic solvents: 0.8 %
· Solid content: 41.9 %
· Other information No further relevant information available.
· VOC - Volatile Organic Compounds
  · European Union 0.78 %
  · Switzerland 0.70 %
  · U.S.A (less water and less exempts) 2.7 g/l / 0.02 lb/gl

10 Stability and reactivity

· Reactivity No further relevant information available.
· Chemical stability
  · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· Possibility of hazardous reactions No dangerous reactions known
· Conditions to avoid No further relevant information available.
· Incompatible materials: No further relevant information available.
· Hazardous decomposition products: No dangerous decomposition products known

11 Toxicological information

· Information on toxicological effects
· Acute toxicity:
  · LD/LC50 values that are relevant for classification:

| 55985-84-9 mixture of methylchloroisothiazolinone and methylisothiazolinone |
|---|---|
| Oral | LD50 oral | 67 mg/kg (rat) |
| Inhalative | LC50 / 4 h | 0.17 mg/l (rat) |
· Primary irritant effect:
  · on the skin: No irritant effect.
  · on the eye: No irritating effect.
· Sensitization: No sensitizing effects known.
· Additional toxicological information:
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations (Directive 1999/45/EC of the European Parliament and of the Council) as issued in the latest version:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
· Carcinogenic categories
  · IARC (International Agency for Research on Cancer)
    titanium dioxide 2B
  · NTP (National Toxicology Program)
    None of the ingredients is listed.
12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:**
    - 55965-84-9 mixture of methylchloroisothiazolinone and methylisothiazolinone
      - LC50 / 96 h: 0.32 mg/l (bluegill sunfish)
      - EC50 / 48 h: 0.12 mg/l (water flea)
      - EC50 / 3 h: 7.92 mg/l (activated sludge)
      - EC50: 0.043 mg/l (n.a.)
      - EC50 / 72 h: 0.048 mg/l (green microalgae) (SPO12089)
      - NOEC: 0.035 mg/l (water flea)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
  - **Behavior in sewer plants:**
    - 55965-84-9 mixture of methylchloroisothiazolinone and methylisothiazolinone
      - EC20 / 0.5 h: 0.97 mg/l (activated sludge)

- **Additional ecological information:**
  - **General remarks:**
    - Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
    - Prevent undiluted product or product in large amounts to reach ground water, open waters or sewer systems.
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.
  - **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation**
    - Must not be disposed of together with household garbage. Do not allow product to reach sewer system.

- **Uncleaned containers/packaging materials:**
  - **Recommendation:**
    - Dispose of packaging according to regulations on the disposal of packagings.
    - Empty contaminated packaging thoroughly. They can be recycled after thorough and proper cleaning.
    - Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
  - **Recommended cleaning agent:** Water, if necessary with cleaning agents.

14 Transport information

- **UN-Number**
  - DOT, ADR, ADN, IMDG, IATA: Void
- **UN proper shipping name**
  - DOT, ADR, ADN, IMDG, IATA: Void
Trade name: JOWAPUR 1K PUR-DISPERSION 150.91

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - SARA Section 355 (extremely hazardous substances)
    None of the ingredients is listed.
  - SARA Section 313 (specific toxic chemical listings)
    None of the ingredients is listed.
  - TSCA (Toxic Substances Control Act) (Substances not listed)
    All ingredients are listed.
  - Proposition 65
    - Prop 65 - Chemicals known to cause cancer
      13463-67-7 titanium dioxide
    - Chemicals known to cause reproductive toxicity for females
      None of the ingredients is listed.
    - Chemicals known to cause reproductive toxicity for males
      None of the ingredients is listed.
    - Chemicals known to cause developmental toxicity
      None of the ingredients is listed.
  - Cancerogenity categories
    - EPA (Environmental Protection Agency)
      acetone
    - TLV (Threshold Limit Value established by ACGIH)
      67-64-1 acetone A4
      13463-67-7 titanium dioxide A4
    - NIOSH-Ca (National Institute for Occupational Safety and Health)
      titanium dioxide
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

These data are based on our present state of information. They shall, however, not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. All standard industrial precautions apply, concerning protection of health, and safe handling. The recommendations have to be examined in the context of the application for which the product is intended, and observed as necessary.

- Date of preparation / last revision: 03/02/2017
- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Trade name: JOWAPUR 1K PUR-DISPERSION 150.91

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

* Data in paragraphs with asterisk are revised in comparison to the previous version.