1 Identification

- Product identifier
  - Trade name: JOWACOLL 114.60
- Relevant identified uses of the substance or mixture and uses advised against
  - Application of the substance / the mixture: Dispersion glue
  - Uses advised against: Restricted to professional users.

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 MSDS:
  - 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 Canada Ltd.
  - P.O. Box 149
  - Mississauga, ON L5M 2B7
  - Tel.: +1 336 434-9154
  - Fax: +1 336 434-9184
  - E-Mail: canada@jowat.com
- Emergency telephone number: 1 800 424 9300 (Chemtrec 24 hours service)

2 Hazard 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
- Hazard description:
  - Workplace Hazardous Materials Information System (WHMIS classification)
    - D2B - Toxic material causing other toxic effects
- 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
  - Vinyl resin
- Dangerous components: Void
4 First aid measures

- Description of first aid measures
  - General information No special measures required.
  - After inhalation
    Supply fresh air and call in physician to be on the safe side.
    In case of unconsciousness place patient in stable side position for transportation.
  - 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 Firefighting 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).
  Ensure adequate ventilation.
- 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.

7 Handling and storage

- Handling
  - Precautions for safe handling
    Store in cool, dry place in tightly closed containers.
    Provide good ventilation/extraction system in the workplace.
    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 MSDS 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. Do not inhale gases / fumes / aerosols.
    - 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:
      Impervious gloves
      - 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 at 20 °C: 6
  - Change in condition
    - Melting point/Melting range: undetermined
    - Boiling point/Boiling range: 100 °C
  - Flash point: Not applicable
  - Flammability (solid, gaseous): Not applicable.
  - Ignition temperature:
  - Decomposition temperature: Not determined.
  - Self-igniting: Product is not selfigniting.
  - Danger of explosion: Product does not present an explosion hazard.
Trade name: JOWACOLL 114.60

44.1.6

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

· Vapor pressure at 20 °C: 23 hPa

· Density at 20 °C: 1,05 g/cm³
  · Relative density Not determined.
  · Vapor density Not determined.
  · Evaporation rate Not determined.

· Solubility in / Miscibility with
  · Water: Fully miscible

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:
  · dynamic at 20 °C: 3,000 mPas
  · kinematic: Not determined.

· Solvent content:
  · Organic solvents: 0,0 %

· Solid content: 44,0 %

Other information

· VOC - Volatile Organic Compounds
  · European Union 0,00 %
  · Switzerland 0,00 %
  · U.S.A (less water and less exempts) 0,0 g/l / 0,00 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: Ethanoic acid

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

  · LD/LC50 values that are relevant for classification:

| 55965-84-9 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: Sensitization possible through skin contact.
· Additional toxicological information:
  The product shows the following dangers 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:

(Contd. on page 5)
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.

<table>
<thead>
<tr>
<th>OSHA-Ca (Occupational Safety &amp; Health Administration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

### 12 Ecological information

<table>
<thead>
<tr>
<th>Toxicity</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Aquatic toxicity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>55965-84-9 mixture of methylchloroisothiazolinone and methylisothiazolinone</td>
</tr>
<tr>
<td>LC50 / 96 h 0,32 mg/l (bluegill sunfish)</td>
</tr>
<tr>
<td>0,22 mg/l (rainbow trout)</td>
</tr>
<tr>
<td>EC50 / 48 h 0,12 mg/l (water flea)</td>
</tr>
<tr>
<td>EC50 / 3 h 7,92 mg/l (activated sludge)</td>
</tr>
<tr>
<td>EC50 0,043 mg/l (n.a.)</td>
</tr>
<tr>
<td>EC50 / 72 h 0,048 mg/l (green microalgae) (SPO12089)</td>
</tr>
<tr>
<td>NOEC 0,035 mg/l (water flea)</td>
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</tbody>
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<thead>
<tr>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>No further relevant information available.</td>
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</tbody>
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<thead>
<tr>
<th>Behavior in environmental systems:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
<tr>
<td>No further relevant information available.</td>
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</tbody>
</table>

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<thead>
<tr>
<th>Mobility in soil</th>
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<tbody>
<tr>
<td>No further relevant information available.</td>
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<table>
<thead>
<tr>
<th>Ecotoxicity:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Behavior in sewer plants:</th>
</tr>
</thead>
<tbody>
<tr>
<td>55965-84-9 mixture of methylchloroisothiazolinone and methylisothiazolinone</td>
</tr>
<tr>
<td>EC20 / 0,5 h 0,97 mg/l (activated sludge)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional ecological information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>General remarks:</td>
</tr>
<tr>
<td>Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.</td>
</tr>
<tr>
<td>Prevent undiluted product or product in large amounts to reach ground water, open waters or sewer systems.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Results of PBT and vPvB assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBT: Not applicable.</td>
</tr>
<tr>
<td>vPvB: Not applicable.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Other adverse effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>No further relevant information available.</td>
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</table>

### 13 Disposal considerations

<table>
<thead>
<tr>
<th>Waste treatment methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation</td>
</tr>
<tr>
<td>Must not be disposed of together with household garbage. Do not allow product to reach sewer system.</td>
</tr>
<tr>
<td>Hand over to hazardous waste disposers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Uncleaned containers/packaging materials:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation:</td>
</tr>
<tr>
<td>Dispose of packaging according to regulations on the disposal of packagings.</td>
</tr>
<tr>
<td>Empty contaminated packaging thoroughly. They can be recycled after thorough and proper cleaning.</td>
</tr>
<tr>
<td>Packagings that cannot be cleansed are to be disposed of in the same manner as the product.</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Recommended cleaning agent:</th>
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<tbody>
<tr>
<td>Water, if necessary with cleaning agents.</td>
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</tbody>
</table>

(Contd. on page 6)
14 Transport information

- UN-Number
  - DOT, TDG, ADN, IMDG, IATA Void
- UN proper shipping name
  - DOT, TDG, ADN, IMDG, IATA Void
- Transport hazard class(es)
  - DOT, TDG, ADN, IMDG, IATA Void
  - Class Void
- Packing group
  - DOT, TDG, IMDG, IATA Void
- Environmental hazards: Not applicable.
- Special precautions for user Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
- UN "Model Regulation": Void

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.
  - Canadian Domestic Substances List (DSL) (Substances not listed) All ingredients are listed.
  - Canadian Non Domestic Substances List (NDSL) (Substances not listed) None of the ingredients is listed.
  - Canadian ingredient disclosure list
    - Limit 0.1 % None of the ingredients is listed.
    - Limit 1 % None of the ingredients is listed.
  - Cancerogenity categories
    - EPA (Environmental Protection Agency) None of the ingredients is listed.
    - TLV (Threshold Limit Value established by ACGIH) None of the ingredients is listed.
    - NIOSH-Ca (National Institute for Occupational Safety and Health) None of the ingredients is listed.
    - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

(Contd. on page 7)
Safety Data Sheet
according to HPR, Schedule 1

Trade name: JOWACOLL 114.60

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 02/09/2017 / -
· 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)
  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)
  WHMIS: Workplace Hazardous Materials Information System (Canada)
  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

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