1 Identification

- **Product identifier**
  - Trade name: Valyric Acid 1000 µg/mL in H2O
  - Article number: IC-VAL-M

- **Details of the supplier of the safety data sheet**
  - Manufacturer/Supplier: High-Purity Standards
    7221 Investment Drive, North Charleston, SC 29418 United States
    Telephone: +1-843-767-7900
    Fax: +1-843-767-7906
    highpuritystandards.com
    Email: info@highpuritystandards.com
  - Information department: Product safety department

2 Hazard(s) identification

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

- **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 0
    - FIRE 0
    - 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**: Mixture of the substances listed below with nonhazardous additions.
4 First-aid measures

- Description of first aid measures
- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: 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 doctor.
- Information for doctor:
  - 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 No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: No special measures required.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal 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

  - PAC-1:
    109-52-4 valeric acid 2.2 mg/m³
  - PAC-2:
    109-52-4 valeric acid 24 mg/m³

(Contd. on page 3)
7 Handling and storage

- Handling:
  - Precautions for safe handling: No special measures required.
  - Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
  - Storage:
    - Requirements to be met by storerooms and receptacles: No special requirements.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
  - Components with limit values that require monitoring at 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 during the creation were used as basis.
- Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures:
      The usual precautionary measures for handling chemicals should be followed.
    - Breathing equipment: Not required.
  - Protection of hands:
    The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation of glove material.
    - Material of gloves:
      The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
    - Penetration time of glove material:
      The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Liquid
      - Color: colorless
    - Odor:
      - 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.
  - Decomposition temperature:
    - Not determined.
  - Auto 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 (17.3 mm Hg)
  - Density at 20 °C (68 °F):
    - 0.99994 g/cm³ (8.3445 lbs/gal)
  - Bulk density:
    - 1,000 kg/m³
  - Relative density:
    - Not determined.
  - Vapor density:
    - Not determined.
  - Evaporation rate:
    - Not determined.
  - Solubility in / Miscibility with
    - Water:
      - Not miscible or difficult to mix.
  - Partition coefficient (n-octanol/water):
    - Not determined.
  - Viscosity:
    - Dynamic:
      - Not determined.
    - Kinematic:
      - Not determined.
  - Solvent content:
    - Water:
      - 99.9 %
Trade name: Valyric Acid 1000 µg/mL in H2O

50.0.3

VOC content: 0.00 %
0.0 g/l / 0.00 lb/gal

Solids content: 0.0 %

Other information

No further relevant information available.

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:
  - 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 internally approved calculation methods for preparations:
  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)
    None of the ingredients is listed.

  - NTP (National Toxicology Program)
    None of the ingredients is listed.

  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.

  - Persistence and degradability: No further relevant information available.
### 50.0.3 Behavior in environmental systems:

- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
  - **General notes:** Not hazardous for water.
- **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:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
  - **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>UN-Number</td>
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<tr>
<td>Environmental hazards:</td>
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<tr>
<td>Special precautions for user</td>
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</tr>
<tr>
<td>Transport in bulk according to Annex II of</td>
<td></td>
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<tr>
<td>MARPOL 73/78 and the IBC Code</td>
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</tr>
<tr>
<td>UN &quot;Model Regulation&quot;:</td>
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</tr>
</tbody>
</table>
### 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.
  - **Section 313 (Specific toxic chemical listings):**
    None of the ingredients is listed.
  - **TSCA (Toxic Substances Control Act):**
    All components have the value ACTIVE.
- **Hazardous Air Pollutants**
  None of the ingredients is listed.
- **Proposition 65**
  - **Chemicals known to cause cancer:**
    None of the ingredients is listed.
  - **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.
- **Carcinogenic 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.
- **GHS label elements** Void
  - **Hazard pictograms** Void
  - **Signal word** Void
  - **Hazard statements** Void
  - **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Environment protection department.
## 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)
- **NFPA**: National Fire Protection Association (USA)
- **HMIS**: Hazardous Materials Identification System (USA)
- **VOC**: Volatile Organic Compounds (USA, EU)
- **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