1. Specification of substance / mixture and company

Trade name / description:
Avidity reagent for recomLine/recomBlot

Identified use:
Laboratory chemicals

Details of the supplier providing the safety data sheet

- **Company name:**
  Mikrogen GmbH
  Floriansbogen 2-4
  82061 Neuried, Germany

- **Informing entity / telephone no.:**
  Tel.: +49(0)89 - 54801-118
  Fax.: +49(0)89 – 54801-100
  E-mail: hendlmeier@mikrogen.de
  Responsible for this SDS: Ms Sonja Hendlmeier

- **EMERGENCY NUMBER:**
  Munich Poison Control Centre: +49(0)89 – 19240

2. Possible hazards

- **Classification in accordance with Regulation (EC) No. 1272/2008 [CLP]:**
  No classification according to 1272/2008

- **Identifying elements:**

<table>
<thead>
<tr>
<th>Hazard pictogram</th>
<th>Signal word</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NONE</strong></td>
<td><strong>NONE</strong></td>
</tr>
</tbody>
</table>

- **Hazard warnings:**
  The product does not require a hazard warning label under Regulation (EC) 1272/2008.
  No special hazards.

*However, please note the information contained in this safety data sheet*
3. Composition/details of the components

- **Chemical characterisation:** Solids
- **CAS No. designation:** 57-13-6 Urea
- **Identification number(s):** EC number: 200-315-5
- **Molecular formula:** CH₄N₂O
- **Molar mass \([g/mol]\):** 60.06

4. First aid measures

- **General information:**
  Immediately remove items of clothing contaminated with product.

- **After inhalation:**
  Go into fresh air; if short of breath, call a doctor.

- **After skin contact:**
  Rinse with plenty of water. Contact a doctor if skin irritation persists.

- **After eye contact:**
  In case of contact with the eyes, rinse immediately with plenty of water and seek medical advice.

- **After swallowing:**
  Rinse mouth out and drink water. Do not induce vomiting. Consult a doctor.

5. Fire-fighting procedures

- **Suitable extinguishing agent:**
  Coordinate fire extinguishing measures with the surroundings. CO₂, extinguishing powder, water spray jet, foam.

- **Extinguishing agents unsuitable for safety reasons:** Full-jet water

- **Special hazards due to substance or mixture**
  A nearby fire can result in hazardous vapours.
  In the event of a fire, the following may be released:
  - Nitrous gases
  - Ammonia fumes (NH₃)

- **Fire-fighting instructions**
  - **Special safety equipment:**
    Wear a respiratory protection device with an independent air supply.

6. Accidental release measures

- **Personal precautions:**
  Ensure adequate ventilation.

- **Environmental precautions:**
  Do not empty into drains / surface water / groundwater.

- **Methods and material for containment and cleaning up**
  Pick up mechanically. Make sure the room is well-ventilated and then clean.
7. Handling and storage

- **Handling:**
  No special measures necessary.

- **Protection against fire and explosion:**
  No special measures necessary.

- **Storage**
  Requirements for storage rooms and containers:
  No special measures necessary.

- **Combined storage:**
  No special measures necessary.

- **Further information about storage conditions:** No special measures necessary.

- **Recommended storage temperature:** No special requirements.

8. Exposure limitation and controls/personal protection

- **Exposure limit values:**
  No data available

- **Personal protective clothing:**
  No special measures necessary

- **Respiratory protection:**
  No special measures necessary

- **Gloves:**
  Protective gloves (DIN EN 455): The protective gloves should, in all cases, be checked for their workplace-specific suitability (e.g. mechanical resistance, product compatibility, anti-static properties). Follow the instructions and information from the protective glove manufacturer concerning the use, storage, maintenance and replacement of gloves. If damaged or showing initial wear marks, the protective gloves should be replaced immediately. Arrange work processes in such a way that the gloves need not be worn continuously.

<table>
<thead>
<tr>
<th>Suitable material</th>
<th>Nitrile</th>
<th>Material thickness</th>
<th>Latex</th>
<th>Material thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penetration time</td>
<td>&gt; 120 min.</td>
<td>&gt; 120 min.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Eye protection:**
  Safety goggles (DIN EN 166)

- **Body protection:**
  Standard laboratory work clothing

- **General protective and hygiene measures:**
  - Do not smoke, eat or drink when working.
  - Keep away from food and drink.
  - Wash hands before breaks and after work.
  - Avoid contact with eyes and skin.
  - Immediately remove soiled or soaked clothing.
9. Physical and chemical properties

General information:
- **Appearance:**
  - Form: Crystalline
  - Colour: White
- **Smell:** Ammonia-like
- **Odour threshold:** Not determined
- **pH value:** 9.0
- **State changes**
  - Melting point / melting range: 132-134 °C
  - Boiling point / boiling range: Not determined
- **Flash point:** Not suitable
- **Flammability (solid, gaseous):** Not suitable
- **Ignition temperature:** Not determined
- **Decomposition temperature:** > 130 °C
- **Self-ignition:** No data available.
- **Risk of explosion:** No data available.
- **Explosion limits:**
  - Lower: No data available.
  - Upper: No data available.
- **Vapour pressure at 20°C:** < 0.1 hPa
- **Density:** 1.34 g/cm³
- **Relative density:** Not determined
- **Vapour density:** Not determined
- **Evaporation rate:** Not determined
- **Solubility in / miscibility with water:** Approx. 1000 g/l
- **Distribution coefficient (n-octanol/water):** -1.59 log POW (exp.)

10. Stability and reactivity

- **Reactivity:**
  Dust explosion risk
- **Chemical stability:** Sensitive to heat / warmth
- **Thermal decomposition / conditions to be avoided:**
  No decomposition if stored and handled correctly.
- **Possible hazardous reactions**
  Major to explosive reactions with:
  - Oxidising agents
  - Halogens
  - Sodium hypochlorite
  - Nitrates
  Emission of hazardous gases or vapours with:
  - Perchlorates
  - Bases
- **Conditions to avoid**
  Strong heating. (Decomposition)
- **Incompatible materials**
  No data available.
- **Hazardous decomposition products**
- In the event of fire: see Section 5
11. Toxicological information

**Acute toxicity: Classification-relevant LD/LC50 values**
- Oral LD 50 8471 mg/kg (rat)
- Dermal LD 50 8200 mg/kg (rat)

- **Specific symptoms in animal testing:**
  - Test for eye irritation (rabbits): No irritation
  - Test for skin irritation (rabbits): No irritation

**Primary irritation:**
- On the skin: No irritation
- In the eyes: No irritation
- After inhalation: No irritation
- Sensitisation: No sensitising effect known.
- **Additional toxicological information:** Swallowing may cause nausea and vomiting.

If handled and used correctly, the product, in our experience and according to the information available, has no harmful effects.

The substance does not require a hazard label warning due to the EC lists in the latest version.

**Further information:** The product must be handled with the care required for chemicals.

12. Environmental information

- **Toxicity**
  - Aquatic toxicity:
    - Fish toxicity
      - LC₅₀ > 6810 mg/l/96 h (Leuciscus idus (ide)) (IUCLID)
    - Daphnia toxicity:
      - EC₅₀ > 10000 mg/l/24 h (Daphnia magna (large water flea)) (IUCLID)
  - **Persistence and degradability**
    - Biodegradability: 96%/16d OECD-302B
  - **Other information:** The product is easily biodegradable.

- **Bioaccumulation potential**
  - Given the n-octanol / water distribution coefficient, accumulation in organisms is not expected (log POW ≤4).

- **Mobility in soil**
  - No further relevant information available.

- **Ecotoxic effects:**
  - Comment:
    - Do not drain into waste water, bodies of water or soil.

- **Results of PBT and vPvB assessment**
  - PBT: Not suitable.
  - vPvB: Not suitable.

- **Other harmful effects**
  - No further relevant information available.
13. Disposal considerations

- **Product:**
  The allocation of a waste code number must be made in accordance with the European Waste Catalogue (AVV - Waste List Ordinance) in consultation with the regional disposer.

- **Packaging:**
  Disposal in accordance with official regulations.

14. Transport information

- Not subject to transport regulations according to ADR, RID, IATA and IMDG.

15. Regulatory information

- Regulations regarding safety, health and environmental protection / specific legal provisions for the material or mixture
- National regulations:
- **Information about limitation of use:**
  Note the limitations of use for young persons in accordance with Section 22 JArbSchG.
- **Hazardous Incidents Ordinance:**
- **Classification according to VbF:** Not applicable
- **Water hazard class:** Not hazardous to water
- **Chemical safety assessment:** No chemical safety assessment has been carried out.

16. Other information

**Further information**

- The information is based upon our present knowledge. It is intended to describe our products in terms of safety requirements, but does not represent any undertaking as regards product quality, nor does it constitute any contractual legal obligation.

- **Section issuing the data sheet:** Department of Occupational Safety and Environmental Protection

- **Contact:** Ms Hendlmeier

**Abbreviations and acronyms:**

- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ICAO: International Civil Aviation Organization
- 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
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
- LC50: Lethal concentration, 50 per cent
- LD50: Lethal dose, 50 per cent
- LD50*: Lethal dose, 50 per cent (not relevant to classification)
- LC50*: Lethal concentration, 50 per cent (not relevant to classification)