1 Identification of the substance/mixture and of the company

- **Product identifier**
- **Trade name:** gL-Remover
- **Product number:** A205100
- **CAS Number:**
  - 127-19-5
- **EC number:**
  - 204-826-4
- **Index number:**
  - 616-011-00-4

- **Application of the substance / the mixture**
  To be used by technically qualified personnel for research and development use only.

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** MicroChem Corp.
    200 Flanders Road
    Westborough, MA 01581 USA
  - **Information department:**
    Product Safety
  - **Emergency telephone number:**
    MicroChem Corp : 617-965-5511
    Chemtrec USA Emergency : 800-424-9300
    Chemtrec International Emergency : 703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - **GHS08 Health hazard**
    - **Repr. 1B** H360 May damage fertility or the unborn child.
  - **GHS07**
    - Acute Tox. 4 H312 Harmful in contact with skin.
    - Acute Tox. 4 H332 Harmful if inhaled.
    - H227 Combustible liquid.

- **Label elements**
  - **GHS label elements**
    The substance is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - **GHS07**
    - **GHS08**

- **Signal word** Danger

(Contd. on page 2)
Trade name: gL-Remover

- **Hazard-determining components of labeling:**
  - N,N-dimethylacetamide

- **Hazard statements**
  - H227 Combustible liquid.
  - H312+H332 Harmful in contact with skin or if inhaled.
  - H360 May damage fertility or the unborn child.

- **Precautionary statements**
  - P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P301+P351 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
  - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  - P370+P378 In case of fire: Use for extinction: Alcohol resistant foam.
  - P370+P378 In case of fire: Use for extinction: Fire-extinguishing powder.
  - P370+P378 In case of fire: Use for extinction: Carbon dioxide.
  - P302+P352 IF ON SKIN: Wash with plenty of soap and water.
  - P403+P233 Store in a well-ventilated place. Keep container tightly closed.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
  - NFPA ratings (scale 0 - 4)
    - Health = 2
    - Fire = 2
    - Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    - Health = *2
    - Fire = 2
    - Reactivity = 0

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

### 3 Composition/information on ingredients

- **Chemical characterization: Substances**
  - CAS No. Description
  - 127-19-3 N,N-dimethylacetamide
  - Identification number(s)
  - EC number: 204-826-4
  - Index number: 616-011-00-4

- **SVHC**
  - 127-19-3 N,N-dimethylacetamide
4 First-aid measures

· **Description of first aid measures**
  
  · **General information:**
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  Immediately remove any clothing soiled by the product.

  · **After inhalation:**
  Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

  · **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

  · **After eye contact:**
  Wash eyes immediately with a large amount of water or normal saline, occasionally lifting upper and lower eye lids until no evidence of chemical remains (at least 20 minutes). Remove contact lenses if present and easy to remove. Seek immediate medical attention.

  · **After swallowing:**
  Do not induce vomiting unless instructed to do so by a physician. Wash out mouth with water and keep person at rest. Seek immediate medical attention.

  · **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** Treat symptomatically.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**
  Alcohol resistant foam
  Fire-extinguishing powder
  Carbon dioxide

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Special hazards arising from the substance or mixture**
  Containers may explode due to pressure increase when container is exposed to extreme heat. Vapors may travel a considerable distance to a source of ignition and flash back along vapor trail.

· **Advice for firefighters**

· **Protective equipment:** Wear SCBA.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
  Ensure adequate ventilation
  Keep away from ignition sources

· **Environmental precautions:** Do not allow to enter sewers/surface or ground water.

· **Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to Section 13.
  Ensure adequate ventilation.

· **Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
7 Handling and storage

- **Handling:**
  - **Precautions for safe handling** Ensure good ventilation/exhaust at the workplace.
  - **Information about protection against explosions and fires:**
    - Protect from heat.
    - Keep ignition sources away - Do not smoke.
    - Protect against electrostatic charges.
  - **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - **Requirements to be met by storerooms and containers:** Store in a cool location.
    - **Information about storage in one common storage facility:**
      - Store away from oxidizing agents.
      - Do not store together with alkalis (caustic solutions).
  - **Further information about storage conditions:**
    - Keep container well-sealed in cool, dry location.
    - Protect from heat and direct sunlight.
    - Store receptacle in a well ventilated area.
  - **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:**

    | Component | PEL Long-term value | REL Long-term value | TLV Long-term value |
    |-----------|---------------------|---------------------|---------------------|
    | 127-19-5 N,N-dimethylacetamide | 35 mg/m³, 10 ppm | 35 mg/m³, 10 ppm | 36 mg/m³, 10 ppm |

  - **Ingredients with biological limit values:**

    | Component | BEI 30 mg/g creatinine |
    |-----------|------------------------|
    | 127-19-5 N,N-dimethylacetamide | Medium: urine |
    | | Time: end of shift at end of workweek |
    | | Parameter: N-Methylacetamide |

- **Additional information:** The lists that were valid during the creation were used as basis.
38.0

Respiratory equipment:
In case of low exposure, use cartridge respirator. In case of intensive or longer exposure, use SCBA.

Protection of hands:
Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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.

Nitrile rubber, NBR

Penetration time of glove material Contact glove manufacture for break-through time.

Eye protection:
Tightly sealed goggles

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
- Appearance:
  - Form: Fluid
  - Color: Colorless
- Odor:
  - Ammonia-like
- Odour threshold: Not determined.
- pH-value: Not determined.
- Change in condition
  - Melting point/Melting range: -20 °C (-4 °F)
  - Boiling point/Boiling range: 165 °C (329 °F)
- Flash point: 66 °C (151 °F)
- Flammability (solid, gaseous): Not applicable.
- Ignition temperature: 390 °C (734 °F)
- Decomposition temperature: Not determined.
- Auto igniting: Not determined.
- Danger of explosion: Not determined.
- Explosion limits:
  - Lower: 1.7 Vol %
  - Upper: 11.5 Vol %
- Vapor pressure at 20 °C (68 °F): 3.3 hPa (2 mm Hg)
- Density at 20 °C (68 °F): 0.9434 g/cm³ (7.873 lbs/gal)
- Relative density: Not determined.
- Vapour density: Not determined.
Trade name: gL-Remover

<table>
<thead>
<tr>
<th>· Evaporation rate</th>
<th>1.6-2.3 (BuAc=1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Solubility in / Miscibility with Water:</td>
<td>Fully miscible.</td>
</tr>
<tr>
<td>· Partition coefficient (n-octanol/water):</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Viscosity:</td>
<td></td>
</tr>
<tr>
<td>Dynamic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Kinematic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

10 Stability and reactivity

· Reactivity
  · Chemical stability: Stable under normal use conditions
  · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
  · Possibility of hazardous reactions: No dangerous reactions known.
  · Conditions to avoid: Contact with incompatible materials.

· Incompatible materials:
  Strong oxidizing agents
  Strong bases

· Hazardous decomposition products:
  Carbon monoxide and carbon dioxide
  Nitrogen oxides (NOx)
  Ammonia

11 Toxicological information

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

<table>
<thead>
<tr>
<th>127-19-5 N,N-dimethylacetamide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
</tr>
<tr>
<td>Dermal LD50</td>
</tr>
</tbody>
</table>

· Primary irritant effect:
  · on the skin: May cause skin irritation
  · on the eye: Irritating effect.
  · Sensitization: Sensitization possible through skin contact.

· Additional toxicological information:

· Carcinogenic categories
  · IARC (International Agency for Research on Cancer)
    Substance is not listed.
  · NTP (National Toxicology Program)
    Substance is not listed.
12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.
- **Additional ecological information:**
  - **General notes:**
    Water hazard class 1 (Assessment by list): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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 as regular garbage/trash. Do not allow product to reach sewage system.
  Disposal must be made in accordance with Federal, State, and Local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made in accordance with Federal, State, and Local regulations.

14 Transport information

- **UN-Number** UN1993
- **DOT, ADR, IMDG, IATA**
- **UN proper shipping name**
  - DOT, ADR Flammable liquids, n.o.s. (N,N-dimethylacetamide)
  - IMDG, IATA FLAMMABLE LIQUID, N.O.S. (N,N-dimethylacetamide)
- **Transport hazard class(es)**
  - DOT, ADR, IMDG, IATA 3 Flammable liquids.
- **Packing group**
  - ADR III
- **Environmental hazards:**
  - Marine pollutant: No
- **Special precautions for user** Warning: Flammable liquids
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** UN1993, Flammable liquids, n.o.s. (N,N-dimethylacetamide), 3, III

(Contd. on page 8)
15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
  · Sara
    · Section 355 (extremely hazardous substances):
      Substance is not listed.
    · Section 313 (Specific toxic chemical listings):
      Substance is not listed.
  · TSCA (Toxic Substances Control Act): All ingredients are listed or comply with TSCA regulations.
  · Proposition 65
    · Chemicals known to cause cancer:
      Substance is not listed.
    · Chemicals known to cause reproductive toxicity for females:
      Substance is not listed.
    · Chemicals known to cause reproductive toxicity for males:
      Substance is not listed.
    · Chemicals known to cause developmental toxicity:
      Substance is listed.

· Carcinogenic categories
  · EPA (Environmental Protection Agency)
    Substance is not listed.
  · TLV (Threshold Limit Value established by ACGIH)
    127-19-5 N,N-dimethylacetamide A4
  · NIOSH-Ca (National Institute for Occupational Safety and Health)
    Substance is not listed.
  · OSHA-Ca (Occupational Safety & Health Administration)
    Substance is not listed.
  · Massachusetts State Right To Know List
    127-19-5 N,N-dimethylacetamide
  · New Jersey State Right To Know List
    127-19-5 N,N-dimethylacetamide
  · Pennsylvania Hazardous Substances List
    127-19-5 N,N-dimethylacetamide

· California SCAQMD Rule 443.1 VOC's: No information available.
· GHS label elements
  The substance is classified and labeled according to the Globally Harmonized System (GHS).
· Hazard pictograms
  GHS07  GHS08
· Signal word Danger
Trade name: gL-Remover

- Hazard-determining components of labeling:
  N,N-dimethylacetamide

- Hazard statements
  H227 Combustible liquid.
  H312+H332 Harmful in contact with skin or if inhaled.
  H360 May damage fertility or the unborn child.

- Precautionary statements
  P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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  P370+P378 In case of fire: Use for extinction: Carbon dioxide.
  P302+P352 IF ON SKIN: Wash with plenty of soap and water.
  P403+P233 Store in a well-ventilated place. Keep container tightly closed.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- 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 MSDS: Product safety department
- Contact: Mr. Cole

- Revision History: New SDS

- Date of preparation / last revision 12/23/2015 / -

- 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
  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