1 Identification of the substance/mixture and of the company

- **Product identifier**
  - **Trade name:** SU-8 2000 Thinner
  - **Product number:** G010100
  - **CAS Number:** 120-92-3
  - **EC number:** 204-435-9
  - **Index number:** 606-025-00-9

- **Application of the substance / the preparation** Thinner, Diluent

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** MicroChem Corp.
    90 Oak Street
    P.O. Box 426
    Newton, MA 02464-0002  USA
  - **Information department:** Product Safety
  - **Email:** productsafety@microchem.com
  - **Emergency telephone number:**
    MicroChem Corp :  617-965-5511
    Chemtrec USA Emergency :  800-424-9300
    Chemtrec International Emergency :  703-527-3887

2 Hazards identification

- **Classification of the substance or mixture**
  - GHS02 Flame
  - Flam. Liq. 3 H226 Flammable liquid and vapor.

  - GHS07
  - Acute Tox. 4 H312 Harmful in contact with skin.
  - Acute Tox. 4 H332 Harmful if inhaled.
  - Skin Irrit. 2 H315 Causes skin irritation.
  - Eye Irrit. 2 H319 Causes serious eye irritation.
  - STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

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

  - GHS02
  - GHS07
---

**Trade name: SU-8 2000 Thinner**

- **Signal word** Warning
- **Hazard-determining components of labelling:**
  - Cyclopentanone
- **Hazard statements**
  - H226 Flammable liquid and vapor.
  - H312+H332 Harmful in contact with skin or if inhaled.
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
  - H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
- **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.
  - P233 Keep container tightly closed.
  - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P312 Call a POISON CENTER or doctor/physician if you feel unwell.
  - P363 Wash contaminated clothing before reuse.
  - P337+P313 If eye irritation persists: Get medical advice/attention.
  - 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.
  - P403+P235 Store in a well-ventilated place. Keep cool.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
    - Health = 2
    - Fire = 3
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - Health = 2
    - Fire = 3
    - Reactivity = 0

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

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**3 Composition/Information on ingredients**

- **Chemical characterization: Substances**
- **CAS No.** Description
  - 120-92-3 cyclopentanone
- **Identification number(s)**
  - **EC number:** 204-435-9
  - **Index number:** 606-025-00-9

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(Contd. of page 3)
4 First aid measures

- Description of first aid measures
- 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: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- 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: Dizziness
- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents:
  Alcohol resistant foam
  Fire-extinguishing powder
  Carbon dioxide
- For safety reasons unsuitable extinguishing agents:
  Water with full jet
  Water
- 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).
  Ensure adequate ventilation.
  Do not flush with water or aqueous cleansing agents
- 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
    Ensure good ventilation/exhaust at the workplace.
    Prevent formation of aerosols.
    Keep receptacles tightly sealed.
    Store in cool, dry place in tightly closed containers.
    Keep away from heat and direct sunlight.
  · Information about protection against explosions and fires:
    Keep ignition sources away - Do not smoke.
    Use explosion-proof apparatus / fittings and spark-proof tools.
    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:
    Do not store together with oxidizing and acidic materials.
  · Further information about storage conditions:
    Keep container well-sealed in cool, dry location.
    Store under lock and key and with access restricted to technical experts or their assistants only.
  · 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: Not required.
  · Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls
  · Personal protective equipment:
    · General protective and hygienic measures:
      Keep away from food and beverages.
      Immediately remove all soiled and contaminated clothing.
      Wash hands before breaks and at the end of work.
      Avoid contact with the eyes and skin.
  · Respiratory equipment:
    In case of low exposure, use cartridge respirator. In case of intensive or longer exposure, use SCBA.
  · Protection of hands:
    Protective gloves

· Material of gloves Nitrile rubber, NBR
· Penetration time of glove material Contact glove manufacture for break-through time.
9 Physical and chemical properties

| · Information on basic physical and chemical properties |
| · General Information |
| · Appearance: |
| Form: Liquid |
| Color: Clear |
| Odor: Etheral |
| Odour threshold: Not determined. |
| pH-value: Not determined. |

| · Change in condition |
| Melting point/Melting range: -51.3 ºC (-60 ºF) |
| Boiling point/Boiling range: 130 ºC (266 ºF) |

| · Flash point: 30 ºC (86 ºF) |
| Flammability (solid, gaseous): Not applicable. |
| Ignition temperature: 430 ºC (806 ºF) |
| Decomposition temperature: Not determined. |
| Auto igniting: Not determined. |

| · Danger of explosion: |
| Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |

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

| · Vapor pressure at 50 ºC (122 ºF):  <200 hPa (<150 mm Hg) |

| · Density at 20 ºC (68 ºF): 0.9502/20 ºC g/cm³ (7.929/166.9 ºC lbs/gal) |
| Relative density: Not determined. |
| Vapour density: Not determined. |
| Evaporation rate: Not determined. |

| · Solubility in / Miscibility with Water: Water miscible No |

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

| · Viscosity: |
| Dynamic: Not determined. |
| Kinematic: Not determined. |
| Organic solvents: 100 % |

| Solids content: 0 % |
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
  - Danger of polymerization.
  - Possible formation of peroxide.
  - Reacts with strong acids.
- Conditions to avoid: Heat, flames and sparks. Extremes of temperature and direct sunlight.
- Incompatible materials:
  - Strong acids
  - Strong oxidizing agents
- Hazardous decomposition products: Carbon monoxide and carbon dioxide

11 Toxicological information

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

<table>
<thead>
<tr>
<th>120-92-3 Cyclopentanone</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>1180 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>&gt;2000 mg/kg (rabbit)</td>
</tr>
<tr>
<td>Inhalative LC50/48 h</td>
<td>&gt;19.5 mg/l (rat)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: Irritating effect.
  - Sensitization: No sensitizing effects known.
- 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:
    - 120-92-3 Cyclopentanone
      - EC50/48 h: 100 mg/l (daphnia magna)
      - EC50/72 h: >100 mg/l (scenedesmus subspicatus)
      - LC50/96 h: >100 mg/l (fish)
  - Persistence and degradability: No further relevant information available.
36.0

· 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
  · DOT, ADR, IMDG, IATA: UN2245

· UN proper shipping name
  · DOT, IMDG, IATA: CYCLOPENTANONE
  · ADR: 2245 CYCLOPENTANONE

· Transport hazard class(es)
  · DOT
    · Class: 3 Flammable liquids.
    · Label: 3

  · ADR, IMDG, IATA
    · Class: 3 Flammable liquids
    · Label: 3

· Packing group
  · DOT, ADR, IMDG, IATA: III
### Trade name: SU-8 2000 Thinner

| Environmental hazards: No |
| Marine pollutant: |
| Special precautions for user: Warning: Flammable liquids |
| Danger code (Kemler): 30 |
| EMS Number: F-E,S-D |
| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable |
| UN "Model Regulation": UN2245, CYCLOPENTANONE, 3, III |

### 15 Regulatory information

- **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): Substance is listed.
  - 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 not listed.
  - Carcinogenic categories
    - EPA (Environmental Protection Agency) Substance is not listed.
    - TLV (Threshold Limit Value established by ACGIH) Substance is not listed.
    - 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 120-92-3 Cyclopentanone
  - New Jersey State Right To Know List 120-92-3 Cyclopentanone
36.0 Pennsylvania Hazardous Substances List
120-92-3 Cyclopentanone

California SCAQMD Rule 443.1 VOC's: 950 g/L

GHS label elements
The substance is classified and labelled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS02 GHS07

Signal word Warning

Hazard-determining components of labelling:
Cyclopentanone

Hazard statements
H226 Flammable liquid and vapor.
H312+H332 Harmful in contact with skin or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
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Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
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P370+P378 In case of fire: Use for extinction: Fire-extinguishing powder.
P370+P378 In case of fire: Use for extinction: Carbon dioxide.
P403+P235 Store in a well-ventilated place. Keep cool.
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. Weber

Last Revision Date:
8/15/2013 Revised hazard and precautionary statements. Updated component toxicology data and US State Right to Know listings.

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)
Trade name: SU-8 2000 Thinner

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
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