Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 08/16/2002  Reviewed on 11/23/1999

- 1 Identification of substance:
  - Product details:
  - Trade name: Cyclopentanone
  - Stock number: 41509
  - Manufacturer/Supplier:
    Alfa Aesar, A Johnson Matthey company
    Johnson Matthey Catalog Company, Inc.
    30 Bond Street
    Ward Hill, MA 01835-8099
    Emergency Phone: (978) 521-6300
    CHEMTREC: (800) 424-9300
    Web Site: www.alfa.com
  - Information department: Health, Safety and Environmental Department
  - Emergency information:
    During normal hours the Health, Safety and Environmental Department.
    After normal hours call Chemtrec at (800) 424-9300.

- 2 Composition/Data on components:
  - Chemical characterization:
    Description: (CAS#)
Cyclopentanone (CAS# 120-92-3), 100%  

Identification number(s):  

EINECS Number: 204-435-9  

EU Number: 606-025-00-9  

3 Hazards identification  

Hazard description: Xi Irritant  

Information pertaining to particular dangers for man and environment  

R 10 Flammable.  
R 36/38 Irritating to eyes and skin.  

4 First aid measures  

After inhalation  

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.  

After skin contact  

Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.  

After eye contact  

Rinse opened eye for several minutes under running water. Then consult a doctor.  

After swallowing Seek immediate medical advice.  

5 Fire fighting measures  

Suitable extinguishing agents  

Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.
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- Special hazards caused by the material, its products of combustion or resulting gases:
  In case of fire, the following can be released:
  Carbon monoxide and carbon dioxide
- Protective equipment:

  Wear self-contained respirator.
  Wear fully protective impervious suit.

- 6 Accidental release measures
  - Person-related safety precautions:

    Wear protective equipment. Keep unprotected persons away.
    Ensure adequate ventilation
    Keep away from ignition sources
  - Measures for environmental protection:

    Do not allow material to be released to the environment without proper governmental permits.
  - Measures for cleaning/collecting:

    Ensure adequate ventilation.
    Keep away from ignition sources.
  - Additional information:

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

    - Information for safe handling:

      Keep container tightly sealed.
      Store in cool, dry place in tightly closed containers.
      Ensure good ventilation at the workplace.
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- Information about protection against explosions and fires:

  Keep ignition sources away.
  Protect against electrostatic charges.
  Fumes can combine with air to form an explosive mixture.

- Storage

- Requirements to be met by storerooms and receptacles:

  No special requirements.
  - Information about storage in one common storage facility:

    Store away from oxidizing agents.
    Store away from reducing agents.
    Do not store together with alkalies (caustic solutions).
    - Further information about storage conditions:

    Keep container tightly sealed.
    Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

- Additional information about design of technical systems:

  Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

  Components with limit values that require monitoring at the workplace:
  Not required.
  - Additional information: No data

- Personal protective equipment

- General protective and hygienic measures

  The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

**Breathing equipment:**

Use suitable respirator when high concentrations are present.

**Protection of hands:** Impervious gloves

**Eye protection:** Safety glasses

**Body protection:** Protective work clothing.

- **9 Physical and chemical properties:**
  - **General Information**
  - **Form:** Liquid
  - **Color:** Colorless
  - **Odor:** Not determined

  **Change in condition**

  **Melting point/Melting range:** -51 °C

  **Boiling point/Boiling range:** 130-131 °C

  **Sublimation temperature / start:** Not determined

  **Flash point:** 30 °C
Ignition temperature: Not determined

Decomposition temperature: Not determined

Explosion limits:

Lower: Not determined

Upper: Not determined

Vapor pressure: Not determined

Density: at 20 °C 0.951 g/cm³

Solubility in / Miscibility with

Water: Not miscible or difficult to mix

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Materials to be avoided:

Oxidizing agents
Reducing agents
Bases

Dangerous reactions No dangerous reactions known
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- Dangerous products of decomposition: Carbon monoxide and carbon dioxide

- 11 Toxicological information
  - Acute toxicity:

  **LD/LC50 values that are relevant for classification:**

  Oral: LD50: 2000 mg/kg (mam)
  Inhalative: LC50: 19500 mg/m3 (rat)
  Irritation of skin: mild: 500 mg (rbt)
  Irritation of eyes: severe: 100 mg (rbt)

  - Primary irritant effect:

  - on the skin: Irritant to skin and mucous membranes.

  - on the eye:

    - Irritating effect.
    - Strong irritant with the danger of severe eye injury.

  - Sensitization: No sensitizing effects known.

  - Subacute to chronic toxicity:

    Other than potential irritation (see above), no information on illness or injury from acute or chronic exposure to this product is available.

  - Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

- 12 Ecological information:
  - General notes:

Do not allow material to be released to the environment without proper governmental permits.
• 13 Disposal considerations

♦ Product:

♦ Recommendation

Consult state, local or national regulations to ensure proper disposal.

♦ Uncleaned packagings:

♦ Recommendation:

Disposal must be made according to official regulations.

• 14 Transport information

♦ DOT regulations:

♦ Hazard class: 3

♦ Identification number: UN2245

♦ Packing group: III

♦ Proper shipping name (technical name):

Cyclopentanone

♦ Land transport ADR/RID (cross-border)

♦ ADR/RID class: 3 Flammable liquids

♦ Item: 31c

♦ Danger code (Kemler): 30
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♦ UN-Number: 2245

♦ Description of goods: Cyclopentanone

♦ Maritime transport IMDG:

♦ IMDG Class: 3

♦ UN Number: 2245

♦ Packaging group: III

♦ Proper shipping name: Cyclopentanone

♦ Air transport ICAO-TI and IATA-DGR:

♦ ICAO/IATA Class: 3

♦ UN/ID Number: 2245

♦ Packaging group: III

♦ Proper shipping name: Cyclopentanone

• 15 Regulations

♦ Product related hazard informations:

♦ Hazard symbols: Xi Irritant

♦ Risk phrases:
10 Flammable.
36/38 Irritating to eyes and skin.

♦ Safety phrases: 23 Do not breathe gas/fumes/vapour/spray.

♦ National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory.

♦ Information about limitation of use:

For use only by technically qualified individuals.

♦ 16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

♦ Department issuing MSDS: Health, Safety and Environmental Department.

♦ Contact: Darrell R. Sanders