1: Identification

- 1.1 Product identifier
  - Trade name: AFCONA - 2025
  - Application of the substance / the mixture: Paint Additives
- 1.3 Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Haiman AFCONA Chemicals Co., Ltd
    29, Daqing Road, Qing-Long Chemical Industrial Park,
    Haimen, Jiangsu Province, 226121, P.R.China
    Tel: +82-513-82658995
- 1.4 Emergency telephone number:
  - For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident
  - Call CHEMTREC Day or Night
  - Within USA and Canada: 1-800-424-9300 CCN796211 or +1 703-527-3887 (collect calls accepted)

2: Hazard(s) identification

- 2.1 Classification of the substance or mixture
  - Classification according to Regulation (EC) No 1272/2008

  GHS02 Flame

  Flam. Liq. 3 H226 Flammable liquid and vapor.

  GHS07

  Acute Tox. 4 H302 Harmful if swallowed.
  Acute Tox. 4 H312 Harmful in contact with skin.
  Acute Tox. 4 H332 Harmful if inhaled.

- 2.2 Label elements
  - Labelling according to Regulation (EC) No 1272/2008
  - The product is classified and labeled according to the CLP regulation.
  - Hazard pictograms

  GHS02
  GHS07

- Signal word Warning

- Hazard-determining components of labeling:
  - cyclohexanone

- Hazard statements
  - H226 Flammable liquid and vapor.
  - H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

- Precautionary statements
  - P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

(Contd. on page 2)
Trade name: AFCONA - 2025

P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P280 Wear protective gloves / eye protection / face protection.
P280 Wear protective gloves / protective clothing.
P240 Ground/bond container and receiving equipment.
P233 Keep container tightly closed.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P321 Specific treatment (see on this label).
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P330 Rinse mouth.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P362+P364 Take off contaminated clothing and wash it before reuse.
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 = 2
    Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    Health = 2
    Fire = 2
    Reactivity = 0

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

3: Composition/information on ingredients

- 3.2 Chemical characterization: Mixtures
  - Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:
  - 108-94-1 cyclohexanone 50-100%

4: First-aid measures

- 4.1 Description of first aid measures
  - General information:
    Immediately remove any clothing soiled by the product.
    Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - After inhalation:
    Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.

· After skin contact: Immediately rinse with water.
· After eye contact: Rinse opened eye for several minutes under running water.
· After swallowing: Immediately call a doctor.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5: Fire-fighting measures

· 5.1 Extinguishing media
  · Suitable extinguishing agents:
    - CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
    - For safety reasons unsuitable extinguishing agents: Water with full jet

· 5.2 Special hazards arising from the substance or mixture
No further relevant information available.

· 5.3 Advice for firefighters
  · Protective equipment: Mouth respiratory protective device.

6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.

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

· 6.3 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 item 13.
  Ensure adequate ventilation.

· 6.4 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

· 7.1 Precautions for safe handling
  Keep receptacles tightly sealed.
  Ensure good ventilation/exhaustion at the workplace.
  Prevent formation of aerosols.

· Information about protection against explosions and fires:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.

· 7.2 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: Keep receptacle tightly sealed.

· 7.3 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.

(Contd. on page 4)
8.1 Control parameters

Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>108-94-1 cyclohexanone</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEL</strong></td>
</tr>
<tr>
<td><strong>REL</strong></td>
</tr>
<tr>
<td><strong>TLV</strong></td>
</tr>
</tbody>
</table>

Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>108-94-1 cyclohexanone</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BEI</strong></td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Time: end of shift at end of workweek</td>
</tr>
<tr>
<td>Parameter: 1,2-Cyclohexanediol with hydrolysis (nonspecific, semi-quantitative)</td>
</tr>
<tr>
<td><strong>8 mg/L</strong></td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Time: end of shift</td>
</tr>
<tr>
<td>Parameter: Cyclohexanol with hydrolysis (nonspecific, semi-quantitative)</td>
</tr>
</tbody>
</table>

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

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/substance/preparation. Due to missing tests no recommendation to the glove material can be given for the product/substance/preparation and the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
## 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**General Information**

- **Appearance:** Fluid
- **Color:** According to product specification
- **Odor:** Characteristic
- **Odour threshold:** Not determined.

**pH-value:** Not determined.

**Change in condition**

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** 153 °C (307 °F)

**Flash point:** 42 °C (108 °F)

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:** 420 °C (788 °F)

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

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

**Explosion limits:**
- **Lower:** 1.3 Vol %
- **Upper:** 9.4 Vol %

**Vapor pressure at 20 °C (68 °F):** 5 hPa (4 mm Hg)

**Density at 20 °C (68 °F):** 0.95 g/cm³ (7.928 lbs/gal)

**Relative density** Not determined.

**Vapour 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:**
- **Organic solvents:** 99.2 %
- **VOC content:** 99.2 %

**Solids content:** 0.8 %

### 9.2 Other information

No further relevant information available.
10: Stability and reactivity

- 10.1 Reactivity: No further relevant information available.
- 10.2 Chemical stability
  - Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions: No dangerous reactions known.
- 10.4 Conditions to avoid: No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

11: Toxicological information

- 11.1 Information on toxicological effects
  - Acute toxicity:
    Harmful if swallowed, in contact with skin or if inhaled.
  - LD/LC50 values that are relevant for classification:
    | Compound     | Oral LD50 | Oral LD50 | Inhalative LC50/4 h |
    |--------------|-----------|-----------|---------------------|
    | 108-94-1 cyclohexanone | 1535 mg/kg (rat) | 948 mg/kg (rabbit) | 8000 mg/l (rat) |
  - Primary irritant effect:
    - on the skin: Based on available data, the classification criteria are not met.
    - on the eye: Based on available data, the classification criteria are not met.
  - Sensitization: Based on available data, the classification criteria are not met.
  - Additional toxicological information:
    - Carcinogenic categories
      - IARC (International Agency for Research on Cancer)
        | Compound     | Carcinogenic category |
        |--------------|-----------------------|
        | 108-94-1 cyclohexanone | 3 |
      - 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

- 12.1 Toxicity
  - Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability: No further relevant information available.
- 12.3 Bioaccumulative potential: No further relevant information available.
- 12.4 Mobility in soil: No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- 12.6 Other adverse effects: No further relevant information available.
### 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:**
  Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14: Transport information

- **14.1 UN-Number**
  - DOT, ADR, IMDG, IATA: UN1866

- **14.2 UN proper shipping name**
  - DOT: Resin solution mixture
  - ADR: 1866 Resin solution mixture
  - IMDG, IATA: RESIN SOLUTION mixture

- **14.3 Transport hazard class(es)**
  - **DOT**
    - **Class:** 3 Flammable liquids
    - **Label:** 3
  - **ADR, IMDG, IATA**
    - **Class:** 3 Flammable liquids
    - **Label:** 3

- **14.4 Packing group**
  - **DOT, ADR, IMDG, IATA:** III

- **14.5 Environmental hazards:**
  - **Marine pollutant:** No

- **14.6 Special precautions for user**
  - **Warning:** Flammable liquids
  - **Danger code (Kemler):** 30
  - **EMS Number:** F-E,S-E
  - **Stowage Category:** A

- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.

- **Transport/Additional information:**
  - **DOT**
    - **Quantity limitations**
      - On passenger aircraft/rail: 60 L
      - On cargo aircraft only: 220 L
  - **ADR**
    - **Excepted quantities (EQ)**
      - Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml
**Safety Data Sheet**  
acc. to OSHA HCS

**Trade name:** AFCONA - 2025

<table>
<thead>
<tr>
<th>IMDG</th>
<th>Limited quantities (LQ)</th>
<th>5L</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excepted quantities (EQ)</td>
<td>Code: E1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum net quantity per outer packaging: 1000 ml</td>
</tr>
<tr>
<td></td>
<td><strong>UN &quot;Model Regulation&quot;:</strong></td>
<td>UN 1866 RESIN SOLUTION MIXTURE, 3, III</td>
</tr>
</tbody>
</table>

### 15: Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- **Sara**
  - **Section 355 (extremely hazardous substances):**
    None of the ingredient is listed.
  - **Section 313 (Specific toxic chemical listings):**
    None of the ingredients is listed.
  - **TSCA (Toxic Substances Control Act):**
    108-94-1 cyclohexanone
  - **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.
  - **Cancerogenity categories**
    - **EPA (Environmental Protection Agency)**
      None of the ingredients is listed.
    - **TLV (Threshold Limit Value established by ACGIH)**
      108-94-1 cyclohexanone A3
    - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
      None of the ingredients is listed.
  - **Labelling according to Regulation (EC) No 1272/2008**
    The product is classified and labeled according to the CLP regulation.

- **Hazard pictograms**
  - GHS02
  - GHS07

- **Signal word** Warning

- **Hazard-determining components of labeling:**
  - cyclohexanone

- **Hazard statements**
  - H226 Flammable liquid and vapor.
  - H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
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P330 Rinse mouth.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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: Product safety department.
• Contact: Mr. Saw Eng Nee
• Date of preparation / last revision 10/27/2015 / -
• 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
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - 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)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 3: Flammable liquids, Hazard Category 3
  - Acute Tox. 4: Acute toxicity, Hazard Category 4

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