1: Identification

1.1 Product identifier

Trade name: AFCONA - 2763

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, Daling Road, Qing-Long Chemical Industrial Park,
Haimen, Jiangsu Province, 226121, P.R.China
Tel: +82-513-82658995

Information department: Product safety department.

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. 2  H225 Highly flammable liquid and vapor.

- GHS08 Health hazard

Carc. 2  H351 Suspected of causing cancer.
Asp. Tox. 1  H304 May be fatal if swallowed and enters airways.

- GHS07

Acute Tox. 4  H332 Harmful if inhaled.
Eye Irrit. 2A  H319 Causes serious eye irritation.
STOT SE 3  H335 May cause respiratory irritation.

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
- GHS08

Signal word: Danger
Hazard-determining components of labeling:
- 4-methylpentan-2-one
- Distillates (petroleum), hydrotreated light
- 2,6-dimethylheptan-4-one

Hazard statements
- H225 Highly flammable liquid and vapor.
- H332 Harmful if inhaled.
- H319 Causes serious eye irritation.
- H351 Suspected of causing cancer.
- H335 May cause respiratory irritation.
- H304 May be fatal if swallowed and enters airways.

Precautionary statements
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- 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.
- P240 Ground/bond container and receiving equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P264 Wash thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P305+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- 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 person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P331 Do NOT induce vomiting.
- P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
- P405 Store locked up.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- 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 = 1
  - Fire = 3
  - Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  - HEALTH = 1
  - FIRE = 3
  - 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.

<table>
<thead>
<tr>
<th>Dangerous components</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-10-1 4-methylpentan-2-one</td>
<td>50-100%</td>
</tr>
<tr>
<td>108-83-8 2,6-dimethylheptan-4-one</td>
<td>10-25%</td>
</tr>
<tr>
<td>64742-47-8 Distillates (petroleum), hydrotreated light</td>
<td>2.5-10%</td>
</tr>
</tbody>
</table>

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. If symptoms persist, consult a doctor.
- After swallowing:
  - If symptoms persist consult 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.
- Open and handle receptacle with care.
- Prevent formation of aerosols.

7.2 Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: Store in a cool location.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions:
    - Keep receptacle tightly sealed.
    - Store in cool, dry conditions in well sealed receptacles.

8: Exposure controls/personal protection

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-10-1 4-methylpentan-2-one</td>
<td>410 mg/m³, 100 ppm</td>
</tr>
<tr>
<td></td>
<td>300 mg/m³, 75 ppm</td>
</tr>
<tr>
<td></td>
<td>205 mg/m³, 50 ppm</td>
</tr>
<tr>
<td>108-83-8 2,6-dimethylheptan-4-one</td>
<td>290 mg/m³, 50 ppm</td>
</tr>
<tr>
<td></td>
<td>150 mg/m³, 25 ppm</td>
</tr>
<tr>
<td></td>
<td>145 mg/m³, 25 ppm</td>
</tr>
</tbody>
</table>

Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-10-1 4-methylpentan-2-one</td>
<td>1 mg/L</td>
</tr>
<tr>
<td></td>
<td>Medium: urine</td>
</tr>
<tr>
<td></td>
<td>Time: end of shift</td>
</tr>
<tr>
<td></td>
<td>Parameter: MIBK</td>
</tr>
</tbody>
</table>

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.
  - Store protective clothing separately.
  - Avoid contact with the eyes.
  - 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/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.

Eye protection:

Tightly sealed goggles

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9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form: 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: 114 °C (237 °F)

Flash point: 14 °C (57 °F)

Flammability (solid, gaseous): Not applicable.

Ignition temperature: 210 °C (410 °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: 0.5 Vol %
Upper: 9.0 Vol %

(Contd. on page 6)
Trade name: AFCONA - 2763

- Vapor pressure at 20 °C (68 °F): 8 hPa (6 mm Hg)
- Density at 20 °C (68 °F): 0.81 g/cm³ (6.759 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: 95.5 %
  - VOC content: 95.5 %
  - 773.6 g/l / 6.46 lb/gl
- Solids content: 4.5 %
- 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 inhaled.
- LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th>108-10-1 4-methylpentan-2-one</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Dermal</td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - on the skin: Based on available data, the classification criteria are not met.
  - on the eye: Causes serious eye irritation.
- Sensitization: Based on available data, the classification criteria are not met.

- Additional toxicological information:
- Carcinogenic categories
- IARC (International Agency for Research on Cancer):
  - 108-10-1 4-methylpentan-2-one: 2B
- NTP (National Toxicology Program):
  - 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.
- Additional ecological information:
  - General notes:
    Water hazard class 1 (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  - 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
  - ADR 1866 Resin solution
  - IMDG, IATA RESIN SOLUTION
- 14.3 Transport hazard class(es)
  - DOT
    - Class 3 Flammable liquids
    - Label 3
  - ADR, IMDG, IATA
    - Class 3 Flammable liquids
### 14.4 Packing group
- **DOT**: II
- **ADR, IMDG, IATA**: III

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

### 14.6 Special precautions for user
- **Warning**: Flammable liquids
- **Danger code (Kemler)**: 33
- **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
- **Transport/Additional information**:
  - **DOT**
    - **Quantity limitations**:
      - On passenger aircraft/rail: 5 L
      - On cargo aircraft only: 60 L
  - **ADR**
    - **Excepted quantities (EQ)**: Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml
  - **IMDG**
    - **Limited quantities (LQ)**: 5L
    - **Excepted quantities (EQ)**: Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml

### 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)**:
  - 108-10-1 4-methylpentan-2-one

**TSCA (Toxic Substances Control Act)**:
- 108-10-1 4-methylpentan-2-one
- 108-83-8 2,6-dimethylheptan-4-one
- 64742-47-8 Distillates (petroleum), hydrotreated light

**Proposition 65**
- **Chemicals known to cause cancer**:
  - 108-10-1 4-methylpentan-2-one
- **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:

108-10-1 4-methylpentan-2-one

Cancerogenity categories:

EPA (Environmental Protection Agency)

108-10-1 4-methylpentan-2-one

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

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
- GHS08

Signal word Danger

Hazard-determining components of labeling:

4-methylpentan-2-one
Distillates (petroleum), hydrotreated light
2,6-dimethylheptan-4-one

Hazard statements

H225: Highly flammable liquid and vapor.
H332: Harmful if inhaled.
H319: Causes serious eye irritation.
H351: Suspected of causing cancer.
H335: May cause respiratory irritation.
H304: May be fatal if swallowed and enters airways.

Precautionary statements

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
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.
P240: Ground/bond container and receiving equipment.
P242: Use only non-sparking tools.
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P264: Wash thoroughly after handling.
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P331: Do NOT induce vomiting.
P370+P378: In case of fire: Use for extinction: CO2, powder or water spray.
P405: Store locked up.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

(Contd. of page 8)
41.2.14 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.

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 SDS: Product safety department.
- Contact: Mr. Saw Eng Nee
- Date of preparation / last revision 10/27/2015 / -
- 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 Organisation
  - 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. 2: Flammable liquids, Hazard Category 2
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
  - Carc. 2: Carcinogenicity, Hazard Category 2
  - STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
  - Asp. Tox. 1: Aspiration hazard, Hazard Category 1