1: Identification

- **1.1 Product identifier**
  - **Trade name:** AFCONA - 2035
  - **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
      - 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

- **Signal word** Warning

- **Hazard-determining components of labeling:**
  2,6-dimethylheptan-4-one

- **Hazard statements**
  H226 Flammable liquid and vapor.
  H335 May cause respiratory irritation.

- **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

(Contd. on page 2)
Trade name: AFCONA - 2035

4.1 Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately rinse with water.
- After eye contact: Rinse opened eye for several minutes under running water.
- 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.

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

5.3 Advice for firefighters
Protective equipment: No special measures required.

5.4 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.

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.

Control parameters

Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Substance</th>
<th>PEL (Long-term value)</th>
<th>REL (Long-term value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-83-8 2,6-dimethylheptan-4-one</td>
<td>290 mg/m³, 50 ppm</td>
<td>150 mg/m³, 25 ppm</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.

· 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/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ 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.

· Eye protection:

  Tightly sealed goggles

9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:
  Form: Fluid
  Color: Colorless
  Odor: Unpleasant
  Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition
  Melting point/Melting range: -46 °C (-51 °F)
  Boiling point/Boiling range: 168 °C (334 °F)

· Flash point: 49 °C (120 °F)

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 345 °C (653 °F)

· Decomposition temperature: Not determined.
Safety Data Sheet
acc. to OSHA HCS

Trade name: AFCONA - 2035

(Contd. of page 4)

- Auto igniting: Product is not selfigniting.
- Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

<table>
<thead>
<tr>
<th>· Explosion limits:</th>
<th>· Danger of explosion:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower:</td>
<td>Product is not explosive. However, formation of explosive air/vapor mixtures are possible.</td>
</tr>
<tr>
<td>Upper:</td>
<td>0.8 Vol %</td>
</tr>
<tr>
<td></td>
<td>6.2 Vol %</td>
</tr>
</tbody>
</table>

- Vapor pressure at 20 °C (68 °F): 5 hPa (4 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 at 20 °C (68 °F): 0.5 g/l
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity: Dynamic: Not determined.
- Kinematic: Not determined.

- Solvent content: Organic solvents: 99.2 %
- VOC content: 99.2 %
- 803.5 g/l / 6.71 lb/gl
- 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: Based on available data, the classification criteria are not met.
- LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th>108-83-8 2,6-dimethylheptan-4-one</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
</tr>
<tr>
<td>Dermal LD50</td>
</tr>
</tbody>
</table>

- 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.

(Contd. on page 6)
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 mixture
  - **ADR** 1866 Resin solution mixture
  - **IMDG, IATA** RESIN SOLUTION mixture
- **14.3 Transport hazard class(es)**
  - **DOT**
    - **Class** 3 Flammable liquids

(Contd. on page 7)
### Trade name: AFCONA - 2035

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

| · 14.4 Packing group | DOT, ADR, IMDG, IATA |
| · Class | 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 |
| · 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 |
| · UN "Model Regulation": | UN 1866 RESIN SOLUTION MIXTURE, 3, III |

### 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): | 108-83-8 2,6-dimethylheptan-4-one |
| · 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)**
  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

#### Signal word
**Warning**

#### Hazard-determining components of labeling:
2,6-dimethylheptan-4-one

#### Hazard statements
- **H226 Flammable liquid and vapor.**
- **H335 May cause respiratory irritation.**

#### 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.
- **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.
- **P304+P340** IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- **P312** Call a POISON CENTER/doctor if you feel unwell.
- **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.

### 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)
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
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3