1 Identification

· 1.1 Product identifier
  · Trade name: AFCONA - 4050
  · 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
  · 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. 3 H226 Flammable liquid and vapor.
    GHS07
    Eye Irrit. 2A H319 Causes serious eye irritation.
    STOT SE 3 H336 May cause drowsiness or dizziness.

· 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

· 2.3 Signal word Warning
  · Hazard-determining components of labeling:
    n-butyl acetate
    butanol
  · Hazard statements
    H226 Flammable liquid and vapor.
    H319 Causes serious eye irritation.

(Contd. on page 2)
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.
- **P303+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.
- **P337+P313** If eye irritation persists: Get medical advice/attention.
- **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

Other hazards

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

Composition/information on ingredients

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

  - **Dangerous components:**
    - 123-86-4 n-butyl acetate 25-50%
    - 78-92-2 butanol 10-25%
    - 108-65-6 2-methoxy-1-methylethyl acetate 10-25%
4 First-aid measures

4.1 Description of first aid measures
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- 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: No special measures required.

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). 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.

Protective Action Criteria for Chemicals

- PAC-1:
  123-86-4 n-butyl acetate 5 ppm
  78-92-2 butanol 150 ppm
  108-65-6 2-methoxy-1-methylethyl acetate 50 ppm

- PAC-2:
  123-86-4 n-butyl acetate 200 ppm
  78-92-2 butanol 220 ppm
  108-65-6 2-methoxy-1-methylethyl acetate 1,000 ppm

- PAC-3:
  123-86-4 n-butyl acetate 3000 ppm
  78-92-2 butanol 10000 ppm
  108-65-6 2-methoxy-1-methylethyl acetate 5000 ppm
7 Handling and storage

7.1 Precautions for safe handling Keep receptacles tightly sealed.
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.

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th></th>
<th>PEL</th>
<th>REL</th>
<th>TLV</th>
<th>WEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>123-86-4 n-butyl acetate</td>
<td>Long-term value: 710 mg/m³, 150 ppm</td>
<td>Short-term value: 710 mg/m³, 150 ppm</td>
<td>Short-term value: 712 mg/m³, 150 ppm</td>
<td>Long-term value: 238 mg/m³, 50 ppm</td>
</tr>
<tr>
<td>78-92-2 butanol</td>
<td>Long-term value: 450 mg/m³, 150 ppm</td>
<td>Short-term value: 455 mg/m³, 150 ppm</td>
<td>Long-term value: 305 mg/m³, 100 ppm</td>
<td>Long-term value: 300 mg/m³, 100 ppm</td>
</tr>
<tr>
<td>108-65-6 2-methoxy-1-methylethyl acetate</td>
<td>Long-term value: 50 ppm</td>
<td></td>
<td></td>
<td></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.
  - Avoid contact with the eyes and skin.
- Breathing equipment: Not required.
- Protection of hands:
  - 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

(Contd. on page 5)
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
  - **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** 124 °C (255 °F)

- **Flash point:** 24 °C (75 °F)

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

- **Ignition temperature:** 315 °C (599 °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:** 1.2 Vol %
  - **Upper:** 10.8 Vol %

- **Vapor pressure at 20 °C (68 °F):** 17 hPa (13 mm Hg)

- **Density at 20 °C (68 °F):** 0.98 g/cm³ (8.178 lbs/gal)

- **Relative density**
  - Not determined.

- **Vapor 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.
Trade name: AFCONA - 4050

- Solvent content:
  - Organic solvents: 55.0 %
  - VOC content: 55.0 %
  - 539.0 g/l / 4.50 lb/gl

- Solids content: 45.0 %

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.
- 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)
    None of the ingredients is listed.

  - 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.

- 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.

(Contd. on page 7)
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
    - 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
  - DOT 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: (Contd. on page 8)
Trade name: AFCONA - 4050

- **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, 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):**
      - 78-92-2 butanol
    - **TSHA (Toxic Substances Control Act):**
      - All ingredients are listed.
  - **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.
  - **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
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
- 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)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit
- Flam. Liq. 3: Flammable liquids – Category 3
- Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3