1 Identification

· 1.1 Product identifier
  · Trade name: AFCONA - 3772
  · 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 H335-H336 May cause respiratory irritation. 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

· Signal word Warning
  · Hazard-determining components of labeling:
    butanol
  · Hazard statements
    H226 Flammable liquid and vapor.
    H319 Causes serious eye irritation.
    H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

(Contd. on page 2)
Trade name: AFCONA - 3772

4.0 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.

2.3 Other hazards

Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

3.2 Chemical characterization: Mixtures

Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>78-92-2</td>
<td>25-50%</td>
</tr>
</tbody>
</table>

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.
4.0 After contacting, advice on general medical care

· 4.1 First-aid measures
· For skin contact: Wash skin with soap and water. In the event of eye contact: Flushing with large amounts of water for 15 minutes. In the event of inhalation: Remove to fresh air.
· For in case of medical advice: Consult a doctor if symptoms occur.
· For symptoms: Consult a doctor if symptoms persist after contact with the substance or mixture.

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

5.0 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.

6.0 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: | 78-92-2 butanol | 150 ppm |
| PAC-2: | 78-92-2 butanol | 220 ppm |
| PAC-3: | 78-92-2 butanol | 10000** ppm |

7.0 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 Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>PEL Long-term value</th>
<th>REL Short-term value</th>
<th>TLV Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>78-92-2 butanol</td>
<td>450 mg/m³, 150 ppm</td>
<td>455 mg/m³, 150 ppm</td>
<td>305 mg/m³, 100 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.
    - 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
    - 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 General Information
  - Appearance:
    - Form: Fluid
    - Color: According to product specification
    - Odor: Characteristic
    - Odor threshold: Not determined.
  - pH-value: Not determined.
Trade name: AFCONA - 3772

### Change in condition
- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** 100 °C (212 °F)

### Flash point:
- 24 °C (75 °F)

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

### Ignition temperature:
- 390 °C (734 °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:** 1.7 Vol %
- **Upper:** 9.8 Vol %

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

### Density at 20 °C (68 °F):
- 0.95 g/cm³ (7.928 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.

### Solvent content:
- **Organic solvents:** 40.0 %
- **VOC content:** 40.0 %
- 380.0 g/l / 3.17 lb/gl

### Solids content:
- 60.0 %

### 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.
· 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
Trade name: AFCONA - 3772

14.3 Transport hazard class(es)
- DOT

  - Class 3

  - Label Flammable liquids

- ADR, IMDG, IATA

  - Class 3

  - Label Flammable liquids

14.4 Packing group
- DOT, ADR, IMDG, IATA

  - Packing group 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:

- 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):
78-92-2 butanol

TSCA (Toxic Substances Control Act):
Not all ingredients are TSCA listed, only below Ingredient/s is/are listed
78-92-2 butanol

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
Date of preparation / last revision 01/18/2017 / -

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)
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
### Trade name: AFCONA - 3772

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation – Category 2A</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) – Category 3</td>
</tr>
</tbody>
</table>

(Contd. of page 8)