Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: Antkote® 2367
Additional Name: Water-soluble hydroxyl acrylic copolymer
Company Name: Wanhua Chemical Group Co., LTD
Address: No.17, Tianshan Rd, YEDA, Yantai, 264006, China
Telephone: 0086-535-3388160 Fax: 0086-535-6875138

Recommended uses:
- It can be used for waterborne one component baking coatings in combination with amino resins or blocked polyisocyanates.

Section 2 - HAZARDS IDENTIFICATION

2.1 GHS Classification of the substance or mixture
- Flammable liquids, Category 3 (H226)
- Skin Corrosion/irritation, Category 2 (H315)
- Serious Eye Damage, Category 1 (H318)

2.2 Label elements

DANGER
Hazard statements:
- H226 Flammable liquid and vapour
- H314 Causes severe skin bums and eye damage

Precautionary statements Prevention:
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P223 Keep container tightly closed
- P240 Ground/bond container and receiving equipment
- P241 Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment
- P242 Use only non-sparking tools
- P243 Take precautionary measures against static discharge
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Precautionary statements Response:
P303+ P361 + P353 IF ON SKIN ( or hair ): Remove/ 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.
P370+P378 In case of fire :Use water spray/fog to extinguish
P304+P340 If inhaled:Remove person to fresh air and keep comfortable for breathing

Precautionary statements Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.

Precautionary statements Disposal:
P501: Dispose of contents/container in accordance with local regulations
Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Substance/mixture: Mixture

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene acrylate copolymer</td>
<td>48-52%</td>
<td>N/A</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>&lt;7%</td>
<td>64-17-5</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>&lt;23%</td>
<td>111-76-2</td>
</tr>
<tr>
<td>water</td>
<td>18-22%</td>
<td>7732-18-5</td>
</tr>
</tbody>
</table>

There is no GHS hazards classification for styrene acrylate polymer.

Hazardous components

2-butoxyethanol
EC-No.: 203-905-0
Classification (1272/2008/EC): Acute Tox.4 Inhalative H332; Acute Tox. 4 Dermal H312; Acute Tox. 4 Oral H302; Eye Irrit. 2 H319; Skin Irrit. 2 H315

Ethyl Alcohol
Index-No.: 603-002-00-5
EC-No.: 200-578-6
Classification (1272/2008/EC): Flam. Lip. 2 H225; Eye irritation 2 H319

The following substances are precautionary mentioned.
Neutralizing agent, bound as a salt:
2-dimethylaminoethanol
Concentration [wt-%]: < 4.5%
CAS-No.: 108-01-0
Index-No.: 603-047-00-0
EC-No.: 203-542-8
Classification (1272/2008/EC): Flam. Liq. 3 H226; Acute Tox.4 Inhalative H332; Acute Tox.4 Dermal H312; Acute Tox.4 Oral H302; Skin Corr. 1B H314; Eye Dam. 1 H318; STOT SE 3 H335
Specific threshold concentration (GHS):
STOT SE 3 H335 >=5%

Candidate list of substances of very high concern for authorization
This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Section 4 - FIRST AID MEASURES

Description of first aid measures

General advice: In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

If inhaled: No special measures are necessary. In case of irritation, seek medical advice.
In case of skin contact: Wash with plenty of water/soap. In case of skin reactions, consult a physician.
In case of eye contact: Rinse cautiously with water for at least 20 minutes. Tilt the head in order to avoid contact with the other eye. Contact an ophthalmologist.
If swallowed: In all cases of doubt, or when symptoms persist, seek medical advice immediately.

**Most important symptoms and effects, both acute and delayed**

**Symptoms:** May cause irritation by skin contact.

**Indication of any immediate medical attention and special treatment needed**

Immediate medical attention: First Aid, decontamination, treatment of symptoms.

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**Section 5 - FIRE FIGHTING MEASURES**

**Extinguishing media**

Suitable extinguishing media: Carbon dioxide (CO₂), Foam, Extinguishing powder, Water spray jet

In case of major fire and large quantities: Water spray jet, alcohol resistant foam

Co-ordinate fire-fighting measures to the fire surroundings.

**Advice for firefighters**

Firefighters have to wear self-contained breathing apparatus.

**Hazards during fire-fighting**

Carbon monoxide, Carbon dioxide, Oxynitride.

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**Section 6 - ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Use personal protection equipment. Keep unauthorized persons away.

**Environmental precautions**

Do not empty into drains.

**Methods and material for containment and cleaning up**

Methods for cleaning up: Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**Reference to other sections**

Reference to other sections Safe handling: see section 7
Personal protection equipment: see section 8

**Disposal:** see section 13

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**Section 7 - HANDLING AND STORAGE**

**Control parameters**

The product does not contain any relevant quantities of materials with critical values that have to be mentioned at the workplace.

**Handling**

The precautions required in the handling of solvents must be taken. Ensure
adequate ventilation and, if necessary, exhaust ventilation when handling or transferring the product. Explosion protection required.

**Storage**

The product will keep stable for 12 months when stored in its sealed original packaging at temperatures between 5°C and 35°C. Storage at temperatures below 5°C will make the product frozen and cause irreversible damage. The product should therefore be protected from freezing during storage. Temperatures higher than 35°C should be avoided in order to prevent the evaporation of water, which will result in the formation of a non-redispersible polymer film.

**Remarks**

The values for density and viscosity are guide values. Please see the product information sheet.

**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

If an annex according to Regulation (EU) No. 1997/2006 is attached to this MSDS, the general RMMs are further specified in the corresponding exposure scenarios.

**8.1 Control parameters**

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS-No.</th>
<th>Basis</th>
<th>Type</th>
<th>Value</th>
<th>Ceiling limit value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>EU ELV</td>
<td>TWA</td>
<td>20 ppm 98mg/m³</td>
<td></td>
<td>Indicative</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>EU ELV</td>
<td>STEL</td>
<td>50 ppm 246mg/m³</td>
<td></td>
<td>Indicative</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>EU ELV</td>
<td></td>
<td></td>
<td></td>
<td>Dermal absorption possible</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>TRGS 900</td>
<td></td>
<td></td>
<td></td>
<td>listed</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>TRGS 900</td>
<td></td>
<td>10 ppm 49mg/m³</td>
<td>4</td>
<td>Y</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>TRGS 900</td>
<td></td>
<td></td>
<td></td>
<td>Dermal absorption possible</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>TRGS 900</td>
<td>STEL</td>
<td></td>
<td></td>
<td>Category II: substances with a resorptive effect</td>
</tr>
</tbody>
</table>

**8.2 Exposure controls**

Respiratory protection: Respiratory equipment required in insufficiently ventilated working areas and during spraying.
Hand protection: Suitable materials for safety gloves; EN 374:
Butyl rubber – IIR: thickness >=0.5mm; breakthrough time >=480min.
Recommendation: contaminated gloves should be disposed of.
Conditionally suitable materials for protective gloves; EN 374:
Nitrile rubber – NBR (>=0.35mm)
Breakthrough time not tested; dispose of immediately after contamination.
Eye protection: Wear eye/face protection.
Body protection: Wear suitable protective clothing.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>Light yellow</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>Slight inherent odour</td>
<td></td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>7.5-9.5</td>
<td>DIN ISO 976</td>
</tr>
<tr>
<td>Pour point</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>41℃</td>
<td>DIN 53213/1</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Burning number</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>explosive limits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>Upper:11.4%(v)/lower:1.1%(v)</td>
<td></td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>Upper: 19%(v)/lower:3.3%(v)</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>ca. 1.06 g/cm³ at 20 ℃</td>
<td></td>
</tr>
<tr>
<td>Miscibility with water</td>
<td>Miscible at 20 ℃</td>
<td></td>
</tr>
<tr>
<td>Surface tension</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Partition</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>1000-8000 mPa.s at 25℃</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Dust explosion class</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not established</td>
<td></td>
</tr>
</tbody>
</table>

9.2 Other information

Revision Date: 2018/8/27   Version: 4
The indicated values do not necessarily correspond to the product specification. Please refer to the technical information sheet for specification data.

**Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION**

**10.1 Stability**
- No decomposition when used properly.

**10.2 Materials to avoid**
- Acids, bases and electrolyte solution.

**10.3 Conditions to avoid**
- Strong light, high temperature and low temperature.

**10.4 Hazardous decomposition products**
- On drying of the coating release of neutralizing agent.

**Section 11 - TOXICOLOGICAL INFORMATION**

Toxicological studies of the product are not available.

**Section 12 - ECOLOGICAL INFORMATION**

Ecotoxicological studies of the product are not available.
Do not allow to escape into waterways, wastewater or soil.

**Section 13 - DISPOSAL CONSIDERATIONS**

Waste treatment methods
- Disposal considerations: Do not dispose of with household waste. Do not allow to enter drains.
- Dispose of waste according to applicable legislation.

Uncleaned empty packaging: Handle contaminated packages in the same way as the substance itself.

Suitable cleaning agents: Water (with cleaning agent)
- Retain contaminated washing water and dispose it.

**Section 14 - TRANSPORTATION INFORMATION**

**ADR/RID**

| 14.1 UN number | 1993 |
| 14.2 UN proper shipping name | RESIN SOLUTION |
| 14.3 Transport hazard class | 3 |
| 14.4 Packing group | III |
| 14.5 Environment hazards | No |

**ADN**

| 14.1 UN number | 1993 |
| 14.2 UN proper shipping name | RESIN SOLUTION |
14.3 Transport hazard class 3
14.4 Packing group III
14.5 Environment hazards No

IATA

14.1 UN number 1993
14.2 UN proper shipping name RESIN SOLUTION
14.3 Transport hazard class 3
14.4 Packing group III
14.5 Environment hazards No

IMDG

14.1 UN number 1993
14.2 UN proper shipping name RESIN SOLUTION
14.3 Transport hazard class 3
14.4 Packing group III
14.5 Environment hazards No

14.6 Special precautions for user

See section 6-8.

Additional information Avoid heat above 35°C or lower than 5°C, stay away from food, acids and bases. According to 57th of IATA DGR 2016, this product is not dangerous.

Section 15 - REGULATORY INFORMATION

15.1 The product is classified and labeled according to Regulation (EC) No. 1272/2008 (GHS/CLP).
15.2 Safety, health and environmental regulation/legislation specific for the substance or mixture Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances.
Not applicable

Section 16 - OTHER INFORMATION

Disclaimer:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.