Safety Data sheet (SDS)

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: Antkote® 2701
Additional Name: Hydroxyfunctional polyacrylic dispersion
Company Name: Wanhua Chemical Group Co., LTD
Address: No.17, Tianshan Rd, YEDA, Yantai, 264006, China
Telephone: 0086-535-3388160
Fax: 0086-535-6875138

Emergencies Telephone:
WANHUA +86 535-8203123
China +86 532-83889090
EU +31 20 20 65132/65130, +44 780 183 7343
NA 800-424-9300, +1-703-527-3887

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

Section 2 - HAZARDS IDENTIFICATION

GHS Classification of the substance or mixture
Skin Corrosion/Irritation, Category 2,
Eye irritation, Category 2A,
Germ cell mutagenicity Category 1B,
Carcinogenicity Category 1B,
Chronic Aquatic Hazard Category 3

Label elements:

Pictogram:

Signal Word: DANGER

Hazard statements:
H315 May cause an allergic skin irritation.
H319 May cause serious eye irritation.
H340 May cause genetic defects.
H350 May cause cancer.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:
Prevention:
P201 Obtain special instructions before use.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.

Response:
P308+P313 IF exposed or concerned: Get medical advice/attention.
P332+P313 IF skin irritation occurs: Get medical advice/attention.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 IF eye irritation persists: Get medical advice/attention.
P302+P352 IF ON SKIN: Wash with plenty of water.
P362+P364 Take off contaminated clothing and wash it before reuse.

Storage:
P405 Store locked up.

Disposal:
P501 Dispose of contents/container in accordance with local regulations.

Physical and Chemical Hazard:

Liquid. Mixes with water.

Health Hazards:

Inhaled: The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Ingestion: The material has not been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

Skin Contact: Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Eye: Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic: On the basis, primarily, of animal experiments, the material may be regarded as carcinogenic to humans. There is sufficient evidence to provide a strong presumption that human exposure to the material may result in cancer on the basis of:
- appropriate long-term animal studies
- other relevant information
There is sufficient evidence to provide a strong presumption that human exposure to the material may result in the development of heritable genetic damage, generally on the basis of:
- appropriate animal studies,
- other relevant information.

Environmental Hazards:
See Section 12.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Substance/mixture: Mixture

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration</th>
<th>CAS No.</th>
</tr>
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<tbody>
<tr>
<td>Polyacrylate containing hydroxygroups</td>
<td>44-46%</td>
<td>N/A</td>
</tr>
<tr>
<td>Solvent naphtha 100</td>
<td>3.5%</td>
<td>64742-95-6</td>
</tr>
<tr>
<td>1-Butoxy-2-propanol</td>
<td>3.5%</td>
<td>5131-66-8</td>
</tr>
<tr>
<td>water</td>
<td>47-49%</td>
<td>7732-18-5</td>
</tr>
</tbody>
</table>

The following substance is precautionary mentioned.
Neutralizing agent, N,N-dimethyl ethanolamine, bound as a salt.

Section 4 - FIRST AID MEASURES

Description of first aid measures:

Eye Contact:
Wash out immediately with water.
If irritation continues, seek medical attention.
Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact:
Immediately remove all contaminated clothing, including footwear.
Flush skin and hair with running water (and soap if available).
Seek medical attention in event of irritation.

Inhalation:
If fumes, aerosols or combustion products are inhaled remove from contaminated area.
Other measures are usually unnecessary.

Ingestion:
Immediately give a glass of water.
First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. **Indication of any immediate medical attention and special treatment needed:**
Treat symptomatically.

### Section 5 - FIRE FIGHTING MEASURES

**Extinguishing media:**
- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

**Advice for firefighters:**

**Fire Fighting:**
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

**Fire/Explosion Hazard:**
- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit irritating/toxic fumes.
- May emit acrid smoke.
- Mists containing combustible materials may be explosive.
- May emit poisonous fumes.
- May emit corrosive fumes.

### Section 6 - ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:**
See section 8

**Measures for Preventing Secondary Contamination:**
Refer to section above

**Environmental precautions:**
See section 12

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

**Minor Spills:**
- Remove all ignition sources.
Clean up all spills immediately.
Avoid breathing vapours and contact with skin and eyes.
Control personal contact with the substance, by using protective equipment.
Contain and absorb spill with sand, earth, inert material or vermiculite.
Wipe up.
Place in a suitable, labelled container for waste disposal.

**Major Spills:**
Clear area of personnel and move upwind.
Alert Fire Brigade and tell them location and nature of hazard.
Wear full body protective clothing with breathing apparatus.
Prevent, by all means available, spillage from entering drains or water courses.
Consider evacuation (or protect in place).
No smoking, naked lights or ignition sources.
Increase ventilation.
Stop leak if safe to do so.
Water spray or fog may be used to disperse / absorb vapour.
Collect recoverable product into labelled containers for recycling.
Collect solid residues and seal in labelled drums for disposal.
Wash area and prevent runoff into drains.
After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
If contamination of drains or waterways occurs, advise emergency services.

**Personal Protective Equipment advice is contained in Section 8 of the SDS.**

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**Section 7 - HANDLING AND STORAGE**

**Precautions for safe handling:**

**Safe handling:**

Avoid all personal contact, including inhalation.
Wear protective clothing when risk of exposure occurs.
Use in a well-ventilated area.
Prevent concentration in hollows and sumps.
Do not enter confined spaces until atmosphere has been checked.
Do not allow material to contact humans, exposed food or food utensils.
Avoid contact with incompatible materials.
When handling, Do not eat, drink or smoke.
Keep containers securely sealed when not in use.
Avoid physical damage to containers.
Always wash hands with soap and water after handling.
Work clothes should be laundered separately. Launder contaminated clothing before re-use.
Use good occupational work practice.
Observe manufacturer's storage and handling recommendations contained within this SDS.
Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Do not allow clothing wet with material to stay in contact with skin.

**Other information:**
Store in original containers.
Keep containers securely sealed.
No smoking, naked lights or ignition sources.
Store in a cool, dry, well-ventilated area.
Store away from incompatible materials and foodstuff containers.
Protect containers against physical damage and check regularly for leaks.
Observe manufacturer's storage and handling recommendations contained within this SDS.

**Storage:**
The product will keep stable for six 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 dam age. 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.

### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

**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

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Status</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Milky white</td>
</tr>
<tr>
<td>Property</td>
<td>Value/Description</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Miscible</td>
</tr>
<tr>
<td>Odour</td>
<td>Slight inherent odour</td>
</tr>
<tr>
<td>Flammability</td>
<td>No</td>
</tr>
<tr>
<td>Vapour pressure (kPa)</td>
<td>Not established</td>
</tr>
<tr>
<td>pH</td>
<td>7.0-9.0 (1:4 Deionized water)</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not established</td>
</tr>
<tr>
<td>n-octanol / water (log kow)</td>
<td>Not established</td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td>&gt;93°C</td>
</tr>
<tr>
<td>Density (g/cm³)</td>
<td>ca. 1.06g/cm³ at 20 °C</td>
</tr>
<tr>
<td>Upper Explosive Limit (%(v/v))</td>
<td>Not established</td>
</tr>
<tr>
<td>Lower Explosive Limit (%(v/v))</td>
<td>Not established</td>
</tr>
<tr>
<td>Boiling point (°C)</td>
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</tr>
<tr>
<td>Explosive properties</td>
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<tr>
<td>Auto-ignition temperature (°C)</td>
<td>Not established</td>
</tr>
<tr>
<td>Decomposition temperature</td>
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<td>Volatile substance</td>
<td>1-Butoxy-2-propanol, Solvent naphtha 100, N,N-dimethyl ethanolamine dimethyl ethanolamine</td>
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<tr>
<td>Molecular weight (g/mol)</td>
<td>Not established</td>
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<tr>
<td>Relative density (Air = 1)</td>
<td>Not established</td>
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<tr>
<td>Relative density (Water = 1)</td>
<td>1.06</td>
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<tr>
<td>Viscosity (cst)</td>
<td>≤5000 mPa.s at 25 °C</td>
</tr>
<tr>
<td>VOC (g/l)</td>
<td>Not established</td>
</tr>
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</table>

**Other information:**
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

Reactivity:
See section 7.

Chemical stability:
Unstable in the presence of incompatible materials
Product is considered stable.
Hazardous polymerisation will not occur.

Possibility of hazardous reactions:
See section 7.

Conditions to avoid:
See section 7.

Incompatible materials:
See section 7.

Hazardous decomposition products:
See section 5.

Section 11 - TOXICOLOGICAL INFORMATION

Polyacrylate containing hydroxylgroups:
TOXICITY:
Not available
IRRITATION:
Not available

1-Butoxy-2-propanol:
TOXICITY:
dermal (rat) LD50: >2000 mg/kg[1]
Inhalation (rat) LC50: >1997.718 mg/l/8hE[2]
Oral (rat) LD50: >2000 mg/kg[1]
IRRITATION:
Eye (rabbit): 15 mg SEVERE
Skin (rabbit0: 500 mg OPEN - mild

Solvent naphtha 100:
TOXICITY:
Dermal (rabbit) LD50: >1900 mg/kg[1]
Inhalation (rat) LC50: >7331.62506 mg/l/8h*[2]
Oral (rat) LD50: >4500 mg/kg[1]
IRRITATION:
Not Available

Section 12 - ECOLOGICAL INFORMATION
Toxicity:

<table>
<thead>
<tr>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
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<td>Antkote® 2701</td>
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<tr>
<td>Polyacrylate containing hydroxy groups</td>
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</tr>
<tr>
<td>Solvent naphtha 100</td>
<td>EC50 48</td>
<td>Crustacea</td>
<td>6.14mg/L</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>EC50 72</td>
<td>Algae or other aquatic</td>
<td>3.24mg/L</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>EC10 72</td>
<td>Algae or other aquatic</td>
<td>1.13mg/L</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>NOEC 72</td>
<td>Algae or other aquatic</td>
<td>1mg/L</td>
<td>1</td>
</tr>
<tr>
<td>1-Butoxy-2-propanol</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites. Do not discharge into sewer or waterways.

Persistence and degradability:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Persistence: Water/Soil</th>
<th>Persistence: Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Butoxy-2-propanol</td>
<td>LOW</td>
<td>LOW</td>
</tr>
</tbody>
</table>

Bioaccumulative potential:
1-Butoxy-2-propanol:
LOW(LogKOW=0.9842)

Mobility in soil:
1-Butoxy-2-propanol:
HIGH (KOC = 1.289)

Section 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods:
Waste chemicals:
Containers may still present a chemical hazard/danger when empty. Return to supplier for reuse/recycling if possible.
Otherwise:
If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
Where possible retain label warnings and SDS and observe all notices pertaining to the product. Legislation addressing waste disposal requirements may differ by country, state and/or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate:
Reduction.
Reuse.
Recycling.
Disposal (if all else fails).
This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it maybe possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
Do not allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
Where in doubt contact the responsible authority.
Recycle wherever possible or consult manufacturer for recycling options.
Consult State Land Waste Management Authority for disposal.
Bury residue in an authorised landfill.
Recycle containers if possible, or dispose of in an authorised landfill.

**Contaminated packing materials:**
Refer to section above

**Precautions for Transport:**
Refer to section above

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**Section 14 - TRANSPORTATION INFORMATION**

<table>
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<th>ADR/RID</th>
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<tbody>
<tr>
<td>14.1 UN number</td>
<td>Not dangerous goods</td>
</tr>
<tr>
<td>14.2 UN proper shipping name</td>
<td>Not dangerous goods</td>
</tr>
<tr>
<td>14.3 Transport hazard class</td>
<td>Not dangerous goods</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>Not dangerous goods</td>
</tr>
<tr>
<td>14.5 Environment hazards</td>
<td>Not dangerous goods</td>
</tr>
</tbody>
</table>

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**ADN |**

| 14.1 UN number | Not dangerous goods |
14.2 UN proper shipping name | Not dangerous goods
14.3 Transport hazard class | Not dangerous goods
14.4 Packing group | Not dangerous goods
14.5 Environment hazards | Not dangerous goods

This classification data does not apply to transportation by tanker. If required, additional information can be requested from the manufacturer.

### IATA

<table>
<thead>
<tr>
<th>14.1 UN number</th>
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<tbody>
<tr>
<td>14.2 UN proper shipping name</td>
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<tr>
<td>14.5 Environment hazards</td>
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### IMDG

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<tr>
<td>14.4 Packing group</td>
<td>Not dangerous goods</td>
</tr>
<tr>
<td>14.5 Environment hazards</td>
<td>Not dangerous goods</td>
</tr>
</tbody>
</table>

### 14.6 Special precautions for user

See section 6-8.

Additional information: Not dangerous cargo.

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
   Water contaminating class (Germany)
   1 slightly water endangering
   (according to Annex 4 to the Directive on Water-Hazardous Substances)
   Any national regulations for the handling of solvents and hazardous substances must be observed

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