GHS SDS--BAKING SODA

SECTION 1: IDENTIFICATION

**Product Identifier**
**Product form:** Substance
**Substance name:** Baking soda
**CAS NO.:** 144-55-8
**Formula:** NaHCO3
**EINECS number:** 205-633-8
**Synonyms:** Sodium Bicarbonate; Carbonic acid monosodium salt.

**Intended Use Of The Product**
**Use of the substance/mixture:** Educational and science kits.

**Name, Address, And Telephone Of Manufacturer/Supplier**
XinXiang Alpha Manufacturing Ltd.
West Of Beihuan Road, Muye District, Xinxiang City, Henan Province, China
PostCode: 453003
E-mail: winni@chinaalpha.net
Emergency telephone No.: 86-373-2515705.

SECTION 2: HAZARDS IDENTIFICATION

**Classification of the substance or mixture**
**GHS-US classification:** Not classified

**Label elements**
**GHS-US Labelling:** No labeling applicable
**Hazard pictograms(GHS-US):** Not applicable
**Signal word(GHS-US):** Not applicable
**Hazard statements(GHS-US):** Not applicable
**Precautionary statements:** Not applicable
**Other hazards**
No additional information available.

**Unknown Acute Toxicity (GHS-US)**
Not available

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Substances**
Name : Sodium Bicarbonate  
CAS No : 144-55-8

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<th>Name</th>
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<th>%</th>
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<td>Baking soda</td>
<td>(CAS No.)144-55-8</td>
<td>100</td>
<td>Not classified</td>
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### SECTION 4: FIRST AID MEASURES

**Description of first aid measures**

**First-aid measures after inhalation:**
Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist.

**First-aid measures after skin contact:**
Wash with water and soap and rinse thoroughly after use. Obtain medical attention if irritation occurs, develops or persists.

**First-aid measures after eye contact:**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if irritation develops or persists.

**First-aid measures after ingestion:**
Never give anything by mouth to an unconscious person. Rinse mouth with water.
Most important symptoms and effects, both acute and delayed
No further relevant information available.

Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing media:
Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media:
For surrounding fire: Use of heavy stream of water may spread fire.

Special hazards arising from the substance or mixture
Fire Hazard: NOT FLAMMABLE. Under fire conditions, hazardous fumes will be present.
Explosion Hazard: Product is not explosive.
Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for firefighters
Precautionary Measures Fire: Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
Firefighting Instructions: Exercise caution when fighting any chemical fire.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Hazardous Combustion Products: Carbon oxides (CO, CO2). Sodium oxides.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
General Measures: Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust or fumes. Avoid skin and eye contact.
For Non-Emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).
For Emergency Personnel
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Ventilate area.

Environmental precautions
Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and material for containment and cleaning up
Clean up spills immediately and dispose of waste safely. Avoid generation of dust during clean-up of spills. Keep in suitable, closed containers for disposal. Contact competent authorities after a spill.

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.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Use personal protective equipment. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage, including any incompatibilities
Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep away from acids, water and lime.

Specific end use(s)
Apart from the uses mentioned in section 1 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
**Additional information:**
No additional information available.

**Exposure controls**

**Respiratory protection**
Respiratory protection is not required under normal usage. Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Hand protection**
Hand protection is not required under normal usage. Wash with water and soap and rinse thoroughly after use.

**Eye protection**
Eye protection is not required under normal usage.

**Skin and body protection**
Skin and body protection is not required under normal usage. Wash with water and soap and rinse thoroughly after use.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Keep away from foodstuffs, beverages and food.

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**
- **Physical State**: Solid powder
- **Colour**: White, crystalline powder
- **Odor**: None
- **Odour Threshold**: Not available
- **pH**: 8.2 (1% Solution)
- **Melting point/freezing point**: Not available
- **Boiling point**: Not available
- **Flash point**: Not available
Ignition temperature: Not available
Autoignition temperature: Not available
Lower flammable limit: Not available
Upper flammable limit: Not available
Vapour pressure: Not available
Density: No data available
Solubility: Water: 8.6 g/100ml @ 20 °C (68 °F)
Partition coefficient n-octanol/water: No data available
Evaporation rate: No data available

Explosion Data – Sensitivity to Mechanical Impact: Not expected to present an explosion hazard due to mechanical impact.

Explosion Data – Sensitivity to Static Discharge: Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Decomposes slowly on exposure to water (moisture).

Possibility Of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions To Avoid: Exposure to moisture or moist air. Temperatures above 150°F (65 °C).

Hazardous Decomposition Products: None known. At high temperature may liberate toxic gases.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
LD50 Oral - Rat - 4220 mg/kg
Skin corrosion/irritation: Not classified [pH: 8.2 (1% Solution)]
Serious eye damage/irritation: Not classified [pH: 8.2 (1% Solution)]
Respiratory or skin sensitisation: Not classified
**Germ cell mutagenicity**: Not classified

**Teratogenicity**: Not classified

**Carcinogenicity**: Not classified

**Reproductive toxicity**: Not classified

**Specific target organ toxicity (single exposure)**: Not classified

**Specific target organ toxicity (repeated exposure)**: Not classified

**Aspiration hazard**: Not classified

**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity**: No additional information available.

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<tr>
<td>LC50 Fish 1</td>
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<td>EC50 Daphnia 1</td>
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<tr>
<td>LC 50 Fish 2</td>
<td>7700 mg/l Rainbow Trout</td>
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</tbody>
</table>

**Persistence and degradability**: 
No further relevant information available.

**Bioaccumulative potential**: No further relevant information available.

**Mobility in soil**: Not available

**PBT and vPvB assessment**: Not available

**Other adverse effects** Not available

**Additional ecological information**: Avoid release to the environment.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods**
Product
Consult state, local or national regulations to ensure proper disposal.

Contaminated packaging
Disposal must be made according to official regulations.

SECTION 14: TRANSPORTATION INFORMATION

In accordance with DOT: Not regulated for transport.
In accordance with IMDG: Not regulated for transport.
In accordance with IATA: Not regulated for transport.
In accordance with TDG: Not regulated for transport.

SECTION 15: REGULATORY INFORMATION

US Federal & International Regulations
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations
Neither this product nor its chemical components appear on any US state lists.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.
SECTION 16: OTHER INFORMATION

HMIS III Rating
Health: 0 Minimal hazard.
Flammability: 0 Minimal hazard.
Physical: 0 Minimal hazard.

NFPE Rating
Health hazard: 0 Minimal hazard.
Fire hazard: 0 Minimal hazard.
Reactivity hazard: 0 Minimal hazard.

Further information
This Product Safety Data Sheet is offered solely for your information, consideration and investigation. We provides no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. We urges persons receiving this information to make their own determination as to the information suitability for their particular application.
GHS SDS--RED CABBAGE JUICE POWDER

SECTION 1: IDENTIFICATION

Product Identifier
Product form: Substance
Substance name: Red cabbage juice powder
CAS NO.: 977010-58-4
Formula: No data available
EINECS number: No data available
Synonyms: Vegetable juice extract, Cabbage red anthocyanin.

Intended Use Of The Product
Use of the substance/mixture: Educational and science kits.

Name, Address, And Telephone Of Manufacturer/Supplier
XinXiang Alpha Manufacturing Ltd.
West Of Beihuan Road, Muye District, Xinxiang City, Henan Province, China
PostCode: 453003
E-mail: winni@chinaalpha.net
Emergency telephone No.: 86-373-2515705.

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS-US classification: Not classified.

Label elements
GHS-US Labelling: No labeling applicable
Hazard pictograms(GHS-US): Not applicable
Signal word(GHS-US): Not applicable
Hazard statements(GHS-US): Not applicable
Precautionary statements: Not applicable
**Potential Health Effects**

**Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.  
**Skin:** Not expected to be harmful under normal conditions of use.  
**Eyes:** May cause eye irritation if contact directly.  
**Ingestion:** Harmful if swallowed.

**Unknown Acute Toxicity (GHS-US)**
Not available

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**Substances**
Name: Red cabbage juice powder  
CAS No: 977010-58-4

<table>
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<tr>
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<td>(CAS No.)977010-58-4</td>
<td>100</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**SECTION 4: FIRST AID MEASURES**

**Description of first aid measures**

**General advice**
Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. Consult a physician.

**First-aid measures after inhalation:**
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

**First-aid measures after skin contact:**
Brush off loose particles from skin. Rinse with plenty of water. Obtain medical attention if irritation develops or persists.
**First-aid measures after eye contact:**
Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

**First-aid measures after ingestion:**
Rinse mouth. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.

**Most important symptoms and effects, both acute and delayed**
No information available.

**Indication of any immediate medical attention and special treatment needed**
No information available.

**SECTION 5: FIREFIGHTING MEASURES**

**Extinguishing media**
**Suitable extinguishing media:**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture**
No information available.

**Advice for firefighters**
**Precautionary Measures Fire:** Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

**Firefighting Instructions:** Exercise caution when fighting any chemical fire.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** No information available.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**
**General Measures:** Handle in accordance with good industrial hygiene and
safety practice. Do not breathe dust or fumes. Avoid skin and eye contact.

For Non-Emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).

For Emergency Personnel
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Ventilate area.

Environmental precautions
Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and material for containment and cleaning up
Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

Conditions for safe storage, including any incompatibilities
Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep away water and moisture.

Specific end use(s)
No information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Components with limit values that require monitoring at the workplace:
No additional information available.

Additional information:
No additional information available.

**Exposure controls**
**Appropriate Engineering Controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Respiratory protection**
Respiratory protection is not required under normal usage.
Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Hand protection**
Hand protection is not required under normal usage. Wash with water and soap and rinse thoroughly after use.

**Eye protection**
Eye protection is not required under normal usage.

**Skin and body protection**
Skin and body protection is not required under normal usage. Wash with water and soap and rinse thoroughly after use.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Keep away from foodstuffs, beverages and food.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**
**Physical State:** Powder
**Colour:** Purple
Odor: None
Odour Threshold: Not available
pH: Not available
Melting point/freezing point: Not available
Boiling point: Not available
Flash point: Not available
Ignition temperature: Not available
Autoignition temperature: Not available
Lower flammable limit: Not available
Upper flammable limit: Not available
Vapour pressure: Not available
Density: No data available
Solubility: Soluble in water
Partition coefficient n-octanol/water: No data available
Evaporation rate: No data available
Explosion Data – Sensitivity to Mechanical Impact: No data available
Explosion Data – Sensitivity to Static Discharge: No data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Decomposes slowly on exposure to water (moisture).

Possibility Of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions To Avoid: Avoid moisture or moist air.

Incompatible Materials: No data available.

Hazardous Decomposition Products: No additional information available.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
LD50: No information found
LC50: No information found

**Skin corrosion/irritation**: May cause irritation.
**Serious eye damage/irritation**: May cause irritation.
**Respiratory or skin sensitisation**: No data available.
**Germ cell mutagenicity**: No data available.
**Teratogenicity**: No data available.
**Carcinogenicity**: This product has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.
**Reproductive toxicity**: No data available.
**Specific target organ toxicity (single exposure)**: No data available.
**Specific target organ toxicity (repeated exposure)**: No data available.
**Aspiration hazard**: No data available.

### SECTION 12: ECOLOGICAL INFORMATION

**Toxicity**: No additional information available.

**Persistence and degradability**: No additional information available.

**Bioaccumulative potential**: No additional information available.

**Mobility in soil**: No additional information available.

**PBT and vPvB assessment**: No additional information available.
**Other adverse effects**: No additional information available.

**Additional ecological information**: Do not allow undiluted production or large quantities of it to reach groundwater, water course or sewage system. Avoid transfer into the environment.

### SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Product**: Consult state, local or national regulations to ensure proper disposal.
Contaminated packaging
Disposal must be made according to official regulations.

SECTION 14: TRANSPORTATION INFORMATION

In accordance with DOT: Not dangerous goods.
In accordance with IMDG: Not dangerous goods.
In accordance with IATA: Not dangerous goods.
In accordance with TDG: Not dangerous goods.

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

OSHA Hazards: No known OSHA hazards

SARA 302 Components:
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components:
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards:
No SARA Hazards

California Prop. 65 Components:
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

SECTION 16: OTHER INFORMATION

HMIS III Rating
**Health:** 0 Minimal hazard.
**Flammability:** 0 Minimal hazard.
**Physical:** 0 Minimal hazard.

**NFPE Rating**
**Health hazard:** 0 Minimal hazard.
**Fire hazard:** 0 Minimal hazard.
**Reactivity hazard:** 0 Minimal hazard.

**Further information**
This Product Safety Data Sheet is offered solely for your information, consideration and investigation. We provide no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. We urges persons receiving this information to make their own determination as to the information suitability for their particular application.
GHS SDS--VEGETABLE OIL

SECTION 1: IDENTIFICATION

Product Identifier
Product form: Substance
Substance name: Vegetable oil
CAS NO.: 8001-22-7
EC number: 232-274-4
Synonyms: Soybean oil

Intended Use Of The Product
Use of the substance/mixture: Educational and science kits.

Name, Address, And Telephone Of Manufacturer/Supplier
XinXiang Alpha Manufacturing Ltd.
West Of Beihuan Road, Muye District, Xinxiang City, Henan Province, China
PostCode: 453003
E-mail: winni@chinaalpha.net
Emergency telephone No.: 86-373-2515705.

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS-US classification
The substance is not classified as hazardous according to the GHS.

Label elements
GHS-US Labelling: Not regulated
Hazard pictograms(GHS-US): Not regulated
Signal word(GHS-US): Not regulated
Hazard statements(GHS-US): Not regulated

Other hazards
No additional information available.
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

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<tr>
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<th>Product Identifier</th>
<th>%</th>
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<td>(CAS No.)8001-22-7</td>
<td>100</td>
<td>Not classified</td>
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SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice
No hazards which require special first aid measures. When symptoms persist or in all cases of doubt seek medical advice.

First-aid measures after inhalation:
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

First-aid measures after skin contact:
Clean with water and soap. If skin irritation continues, consult a doctor.

First-aid measures after eye contact:
Remove contact lenses if worn. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

First-aid measures after ingestion:
Rinse out mouth and then drink plenty of water.

Most important symptoms and effects, both acute and delayed
Slight irritant effect on eyes.
Gastric or intestinal disorders when ingested.
Indication of any immediate medical attention and special treatment needed
No additional information available.

SECTION 5: FIREFIGHTING MEASURES

Flammable Properties
Material may pose fire hazard because it is dispersed (or spread) by water.

Extinguishing media
Suitable extinguishing media:
Dry chemical. Dry chemical powder. Carbon dioxide (CO2). Foam. Sand. Fog. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media:
Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide.

Advice for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Avoid high pressure washing or generation of aerosols. Material can create slippery conditions.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not allow product to reach soil, sewage system or any water course.

Methods and material for containment and cleaning up
Dam up. Soak up with inert absorbent material. Use dry spill kit material or
sand, collect in appropriate containers. For disposal information see section 13. Clean contaminated surface thoroughly.

**Other Information**
Oil soaked materials may spontaneously combust

**SECTION 7: HANDLING AND STORAGE**

**Precautions for safe handling**
Store in cool, dry place in tightly closed containers. Prevent formation of aerosols. Avoid splashes or spray in enclosed areas.

**Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.

**Conditions for safe storage, including any incompatibilities**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Avoid storage near extreme heat, ignition sources or open flame. Store away from oxidizing agents.

**Specific end use(s)**
No additional information available.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**
Components with limit values that require monitoring at the workplace:

**PEL(USA):** Short-term value: 15* 5**mg/m³

**OEL (Canada):** Short-term value: 10* 3** mg/m³

*Total **Respirable fraction

**Additional information:**
The lists that were valid during the creation were used as basis.

**Exposure controls**
**Respiratory protection**
Not required under normal conditions of use.
For spills, respiratory protection may be advisable.
Use suitable respiratory protective device when aerosol or mist is formed.
Use suitable respiratory protective device in case of insufficient ventilation.

**Hand protection**
Hand protection is not required under normal usage. Wash with water and soap and rinse thoroughly after use.

**Eye protection**
Eye protection is not required under normal usage.

**Skin and body protection**
Skin and body protection is not required under normal usage. Wash with water and soap and rinse thoroughly after use.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Keep away from foodstuffs, beverages and food.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

- **Appearance Form:** Liquid
- **Colour:** Light yellow
- **Odor:** Slight vegetable oil
- **Odour Threshold:** No data available
- **pH:** No data available
- **Melting point/freezing point:** No data available
- **Boiling point:** No data available
- **Flash point:** No data available
- **Ignition temperature:** No data available
- **Autoignition temperature:** No data available
- **Lower explosion limit:** No data available
- **Upper explosion limit:** No data available
- **Vapour pressure:** No data available
- **Density:** 0.92 at 20 °C
Solubility in Miscibility with water: Insoluble
Partition coefficient n-octanol/water: No data available
Evaporation rate: No data available

Other information
No additional information available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No data available.

Chemical Stability: Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to specifications.
To avoid thermal decomposition do not overheat.

Possibility Of Hazardous Reactions:
Reacts with strong oxidizing agents.
Reacts with strong alkali.
Toxic fumes may be released if heated above the decomposition point.

Conditions To Avoid:
Store away from oxidizing agents.
Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials: Strong oxidizing agents

Hazardous Decomposition Products:
Thermal decomposition leads to formation of acrolein, Carbon monoxide (CO), Carbon dioxide (CO2), Smoke, Fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
Intravenous LD50 - rat: 16500 mg/kg
**Oral LD50**: Not data available.
**Inhalation LC50**: Not data available.

**Skin corrosion/irritation**: Not data available
**Serious eye damage/irritation**: Not data available.
**Respiratory or skin sensitisation**: Not data available
**Germ cell mutagenicity**: No data available.
**Carcinogenicity**: No classification data on carcinogenic properties of this material is available from the EPA,IARC,NTP,OSHA, or ACGIH.
**Reproductive toxicity**: No data available.
**Specific target organ toxicity (single exposure)**: May cause respiratory irritation.
**Specific target organ toxicity (repeated exposure)**: No data available.
**Aspiration hazard**: No data available.

**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity**
Aquatic toxicity: LC50 > 10000mg/L(OECD 203)

**Persistence and degradability**
Readily biodegradable.

**Bioaccumulative potential**
Does not accumulate in organisms.

**Mobility**
The product is insoluble and floats on water.

**PBT and vPvB assessment**
No data available.

**Other adverse effects**
No data available.
**Additional ecological information**
Not known to be hazardous to water. Due to available data on eliminability/decomposition and bioaccumulation potential a prolonged damage to the environment is unlikely.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Product**
Consult state, local or national regulations to ensure proper disposal.

**Contaminated packaging**
Disposal must be made according to official regulations.

**SECTION 14: TRANSPORTATION INFORMATION**

**UN-Number (DOT, ADN, IMDG, IATA)**
Not regulated.

**UN proper shipping name (DOT, ADN, IMDG, IATA)**
Not regulated.

**Transport hazard class(es) (DOT, ADR, ADN, IMDG, IATA Class)**
Not regulated.

**Packing group (DOT, IMDG, IATA)**
Not regulated.

**Environmental hazards**
Not regulated.

**Special precautions for user**
Not applicable.
SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture.

SARA:
Section 355 (extremely hazardous substances): Substance is not listed.
Section 313 (Specific toxic chemical listings): Substance is not listed.
TSCA (Toxic Substances Control Act): Substance is listed.

Proposition 65 (California):
Chemicals known to cause cancer: Substance is not listed.
Chemicals known to cause reproductive toxicity for females: Substance is not listed.
Chemicals known to cause reproductive toxicity for males: Substance is not listed.
Chemicals known to cause developmental toxicity: Substance is not listed.

Carcinogenic categories:
EPA (Environmental Protection Agency): Substance is not listed.
IARC (International Agency for Research on Cancer): Substance is not listed.
TLV (Threshold Limit Value established by ACGIH): Substance is not listed.
NIOSH-Ca (National Institute for Occupational Safety and Health): Substance is not listed.
OSHA-Ca (Occupational Safety & Health Administration): Substance is not listed.
State Right to Know Listings: Substance is not listed.

SECTION 16: OTHER INFORMATION

HMIS Ill Rating
Health: 0 Minimal hazard.
Flammability: 1 Slight hazard.
Physical: 0 Minimal hazard.

NFPE Rating
Health hazard: 0 Minimal hazard.
**Fire hazard:** 1 Slight hazard.
**Reactivity hazard:** 0 Minimal hazard.

**Further information**
This Product Safety Data Sheet is offered solely for your information, consideration and investigation. We provide no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. We urges persons receiving this information to make their own determination as to the information suitability for their particular application.
GHS SDS--CITRIC ACID

SECTION 1: IDENTIFICATION

Product Identifier
Product form: Substance
Substance name: Citric Acid
CAS NO.: 5949-29-1
Formula: C6H8O7.H2O
EC number: 201-069-1
Synonyms: Hydrous citric acid; Citric acid, monohydrate; Citric acid Mono; 2-hydroxypropane-1,2,3-tricarboxylic acid hydrate (1:1)

Intended Use Of The Product
Use of the substance/mixture: Educational and science kits.

Name, Address, And Telephone Of Manufacturer/Supplier
XinXiang Alpha Manufacturing Ltd.
West Of Beihuan Road, Muye District, Xinxian City, Henan Province, China
PostCode: 453003
E-mail: winni@chinaalpha.net
Emergency telephone No.: 86-373-2515705.

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS-US classification

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Skin Irrit.2</td>
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</tr>
<tr>
<td>Eye Irrit.2A</td>
<td>H319</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>H335</td>
</tr>
</tbody>
</table>

Label elements
GHS-US Labelling
Hazard pictograms(GHS-US) :

GHS07
**Signal word (GHS-US)**: Warning

**Hazard statements (GHS-US)**:
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation

**Precautionary statements**:
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- 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.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local /regional/ national / international regulations.

**Other hazards**
No additional information available.

---

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**Substances**

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
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<tr>
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<td>Skin Irrit.2, H315 Eye Irrit.2A, H319 STOT SE 3, H335</td>
</tr>
</tbody>
</table>

---

**SECTION 4: FIRST AID MEASURES**

**Description of first aid measures**

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.
**First-aid measures after inhalation:**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**First-aid measures after skin contact:**
Take off contaminated clothing and shoes immediately. Immediately wash with water and soap and rinse thoroughly for at least 15 minutes. Consult a physician.

**First-aid measures after eye contact:**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**First-aid measures after ingestion:**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Most important symptoms and effects, both acute and delayed**
Vomiting, Diarrhoea, Damage to tooth enamel., Dermatitis

**Indication of any immediate medical attention and special treatment needed**
No additional information available.

**SECTION 5: FIREFIGHTING MEASURES**

**Extinguishing media**
**Suitable extinguishing media:**
Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture**
If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide.

**Advice for firefighters**
Wear self-contained respirator. Wear fully protective impervious suit.
SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

**Environmental precautions**
Do not allow product to reach sewage system or any water course. Do not allow to penetrate the ground / soil.

**Methods and material for containment and cleaning up**
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**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.

SECTION 7: HANDLING AND STORAGE

**Precautions for safe handling**
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Ensure good ventilation at the workplace.

**Conditions for safe storage, including any incompatibilities**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Store away from water or moisture. Store away from oxidizing agents.

**Specific end use(s)**
No additional information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:
No additional information available.

Exposure controls
Respiratory protection
Respiratory protection is not required under normal usage. Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Hand protection
Wear protective gloves.

Eye protection
Safety glasses.

Skin and body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
Appearance Form: Crystalline
Colour: White
Odor: Odorless
Odour Threshold: No data available
pH: 1.8 at 50 g/l at 20 °C (68 °F)
Melting point/freezing point: No data available
Boiling point: No data available
**Flash point**: No data available

**Ignition temperature**: No data available

**Autoignition temperature**: No data available

**Lower explosion limit**: No data available

**Upper explosion limit**: No data available

**Vapour pressure**: No data available

**Density**: No data available

**Solubility in Miscibility with water**: Soluble

**Partition coefficient n-octanol/water**: No data available

**Evaporation rate**: No data available

**Other information**

No additional information available.

**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity**: No data available.

**Chemical Stability**: Stable under recommended storage conditions.

**Possibility Of Hazardous Reactions**: Reacts with strong oxidizing agents.

**Conditions To Avoid**: No data available.

**Incompatible Materials**: Oxidizing agents, Bases, Water, Moisture.

**Hazardous Decomposition Products**: Carbon monoxide and carbon dioxide.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Information on toxicological effects**

**Acute toxicity**: LD50 Intraperitoneal - rat - 375 mg/kg

**Skin corrosion/irritation**: Causes skin irritation.

**Serious eye damage/irritation**: Causes serious eye irritation.

**Respiratory or skin sensitisation**: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**Germ cell mutagenicity**: No data available.
**Carcinogenicity** : No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA, or ACGIH.

**Reproductive toxicity** : No data available.

**Specific target organ toxicity (single exposure)** :
May cause respiratory irritation.

**Specific target organ toxicity (repeated exposure)** :
No data available.

**Aspiration hazard** : No data available.

## SECTION 12: ECOLOGICAL INFORMATION

**Toxicity**
No data available.

**Persistence and degradability**
No data available.

**Bioaccumulative potential**
No data available.

**Mobility in soil**
No data available.

**PBT and vPvB assessment**
No data available.

**Other adverse effects**
No data available.

**Additional ecological information**
Do not allow undiluted production or large quantities of it to reach ground water, water course or sewage system. Avoid transfer into the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods**
Product
Consult state, local or national regulations to ensure proper disposal.

Contaminated packaging
Disposal must be made according to official regulations.

SECTION 14: TRANSPORTATION INFORMATION

Not a hazardous material for transportation.

UN-Number (DOT, ADN, IMDG, IATA)
Not applicable.

UN proper shipping name (DOT, ADN, IMDG, IATA)
Not dangerous goods.

Transport hazard class(es) (DOT, ADR, ADN, IMDG, IATA)
Not applicable.

Packing group (DOT, IMDG, IATA)
Not applicable.

Environmental hazards
Not applicable.

Special precautions for user
Not applicable.

SECTION 15: REGULATORY INFORMATION

National regulation
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

Massachusetts Right To Know Components
No Components Listed
Pennsylvania Right To Know Components
Citric acid monohydrate  CAS-No.5949-29-1

New Jersey Right To Know Components
Citric acid monohydrate  CAS-No.5949-29-1

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: OTHER INFORMATION

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the resent state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. We shall not be held liable for any damage resulting from handling or from contact with the above product.
GHS SDS--COLOR TABLET

SECTION 1: IDENTIFICATION

Product Identifier
Product form: Substance
Substance name: Color tablet
CAS NO.: Not available
Formula: Not available
EC number: Not available
Synonyms: Not available

Intended Use Of The Product
Use of the substance/mixture: Educational and science kits.

Name, Address, And Telephone Of Manufacturer/Supplier
XinXiang Alpha Manufacturing Ltd.
West Of Beihuan Road, Muye District, Xinxiang City, Henan Province, China
PostCode: 453003
E-mail: winni@chinaalpha.net
Emergency telephone No.: 86-373-2515705.

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS-US classification: Not classified

Label elements
GHS-US Labelling: No labeling applicable
Hazard pictograms(GHS-US): Not applicable
Signal word(GHS-US): Not applicable
Hazard statements(GHS-US): Not applicable
Precautionary statements: Not applicable
**Potential health effects:**

**Eye:** May cause irritation to eye when contact directly.
**Skin:** Not cause skin irritation under normal use.
**Ingestion:** May cause gastrointestinal irritation.
**Inhalation:** Not cause inhalation irritation under normal use.
**Chronic:** No information found.

**Unknown Acute Toxicity (GHS-US)**
Not available

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Substances**
Red color tablet

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<thead>
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<th>Name</th>
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<tr>
<td>Sodium Sulfate</td>
<td>(CAS No.)7757-82-6</td>
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<td>Citric Acid</td>
<td>(CAS No.)77-92-9</td>
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<td>PEG-8</td>
<td>(CAS No.)5117-19-1</td>
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Yellow color tablet

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Blue color tablet

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<tr>
<td>Citric Acid</td>
<td>(CAS No.)77-92-9</td>
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<tr>
<td>Brilliant Blue(Cl42090)</td>
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</table>

**SECTION 4: FIRST AID MEASURES**

**Description of first aid measures**

**General advice**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. Consult a physician.

**First-aid measures after inhalation:**

Not cause inhalation irritation under normal use. If breathed in, move person into fresh air. If not breathing, give artificial respiration.

**First-aid measures after skin contact:**

Wash with water and soap and rinse thoroughly after use. Obtain medical attention if irritation occurs, develops or persists.

**First-aid measures after eye contact:**

Immediately flush with large amounts of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined by a physician if feel uncomfortable.
First-aid measures after ingestion:
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician if irritation or symptoms occur.

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

Indication of any immediate medical attention and special treatment needed
No additional information available.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing media:
This substance is not flammable. Use extinguishing media appropriate for surrounding fire.

Special hazards arising from the substance or mixture
Fire Hazard: NOT FLAMMABLE. Under fire conditions, hazardous fumes will be present.
Explosion Hazard: Product is not explosive.
Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for firefighters
Precautionary Measures Fire: Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
Firefighting Instructions: Exercise caution when fighting any chemical fire.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
General Measures: Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust or fumes. Avoid skin and eye contact.
For Non-Emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).

For Emergency Personnel
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Ventilate area.

Environmental precautions
Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and material for containment and cleaning up
Gather them carefully. Avoid generating dust. Sweep up in a waste container.
Flush residual area with copious amounts of water.

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.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Use personal protective equipment. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed. Store in a cool dry and well-ventilated place.
Store away from high temperature. Keep container tightly closed and sealed
until ready to use. Store away from moist and water.

Specific end use(s)
No additional information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:**
No additional information available.

**Exposure controls**
**Appropriate Engineering Controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Respiratory protection**
Respiratory protection is not required under normal usage.
Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Hand protection**
Hand protection is not required under normal usage. Wash with water and soap and rinse thoroughly after use.

**Eye protection**
Eye protection is not required under normal usage.

**Skin and body protection**
Skin and body protection is not required under normal usage. Wash with water and soap and rinse thoroughly after use.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Keep away from foodstuffs, beverages and food.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**
**Physical State:** Solid
**Colour:** Red/Yellow/Blue
**Odor**: None  
**Odour Threshold**: Not available  
**pH**: Not available  
**Melting point/freezing point**: Not available  
**Boiling point**: Not available  
**Flash point**: Not available  
**Ignition temperature**: Not available  
**Autoignition temperature**: Not available  
**Lower flammable limit**: Not available  
**Upper flammable limit**: Not available  
**Vapour pressure**: Not available  
**Density**: No data available  
**Solubility**: Soluble in water.  
**Partition coefficient n-octanol/water**: No data available  
**Evaporation rate**: No data available  
**Explosion Data – Sensitivity to Mechanical Impact**: No data available  
**Explosion Data – Sensitivity to Static Discharge**: No data available

**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity**: Hazardous reactions will not occur under normal conditions.

**Chemical Stability**: Stable under recommended storage conditions.

**Possibility Of Hazardous Reactions**: No data available.

**Conditions To Avoid**: Exposure to moisture or water.


**Hazardous Decomposition Products**: No data available.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Information on toxicological effects**

**Acute toxicity**:
**LD50 Intravenous**: Not data available.
**Oral LD50**: Not data available.
**Inhalation LC50**: Not data available.

**Skin corrosion/irritation**: Not data available.

**Serious eye damage/irritation**: Not data available.

**Respiratory or skin sensitisation**: Not data available.

**Germ cell mutagenicity**: No data available.

**Carcinogenicity**: No data available.

**Reproductive toxicity**: No data available.

**Specific target organ toxicity (single exposure)**: No data available.
**Specific target organ toxicity (repeated exposure)**: No data available.

**Aspiration hazard**: No data available.

**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity**
No data available.

**Persistence and degradability**
No data available.

**Bioaccumulative potential**
No data available.

**Mobility in soil**
No data available.

**PBT and vPvB assessment**
No data available.
Other adverse effects
No data available.

Additional ecological information
Do not allow undiluted production or large quantities of it to reach ground water, water course or sewage system. Avoid transfer into the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product
Consult state, local or national regulations to ensure proper disposal.

Contaminated packaging
Disposal must be made according to official regulations.

SECTION 14: TRANSPORTATION INFORMATION

In accordance with DOT: Not regulated for transport.
In accordance with IMDG: Not regulated for transport.
In accordance with IATA: Not regulated for transport.
In accordance with TDG: Not regulated for transport.

SECTION 15: REGULATORY INFORMATION

This substance is not classified as a dangerous substance.

OSHA hazards:
No additional information available.

SARA 302 components:
No additional information available.

SARA 311/312 hazards:
No additional information available.
Massachusetts Right To Know components:
No additional information available.

California Prop. 65 components:
No additional information available.

SECTION 16: OTHER INFORMATION

Further Information
This Product Safety Data Sheet is offered solely for your information, consideration and investigation. We provides no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. We urges persons receiving this information to make their own determination as to the information suitability for their particular application.
GHS SDS--CROSS-LINKED POLYACRYLATE COPOLYMER

SECTION 1: IDENTIFICATION

Product Identifier
Product form: Substance
Substance name: Cross-Linked Polyacrylate Copolymer
CAS NO.: Not applicable
EC number: Not applicable
Synonyms: Not applicable

Intended Use Of The Product
Use of the substance/mixture: Educational and science kits.

Name, Address, And Telephone Of Manufacturer/Supplier
XinXiang Alpha Manufacturing Ltd.
West Of Beihuan Road, Muye District, Xinxian City, Henan Province, China
PostCode: 453003
E-mail: winni@chinaalpha.net
Emergency telephone No.: 86-373-2515705.

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS-US classification
The substance is not classified as hazardous according to the GHS.

Label elements
GHS-US Labelling: Not regulated
Hazard pictograms(GHS-US): Not regulated
Signal word(GHS-US): Not regulated
Hazard statements(GHS-US): Not regulated
Other hazards
No additional information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
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<tr>
<td>2-Propenoic acid, polymer with sodium 2-propenoate(1:1)</td>
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<td>Water</td>
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<td>5</td>
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SECTION 4: FIRST AID MEASURES

Description of first aid measures

First-aid measures after inhalation:
If inhaled clear blocked airways, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

First-aid measures after skin contact:
Wash with water and soap and rinse thoroughly after use. Obtain medical attention if irritation occurs, develops or persists.

First-aid measures after eye contact:
If product comes in to contact with eyes, immediately flush eyes with a large quantity of water for 15 minutes. If irritation persists, seek medical attention.

First-aid measures after ingestion:
If accidentally swallowed, dring plenty of water. If a large quantity is swallowed, seek medical advice.
Most important symptoms and effects, both acute and delayed
No additional information available.

Indication of any immediate medical attention and special treatment needed
No additional information available.

SECTION 5: FIREFIGHTING MEASURES

Flammable Properties
No data available.

Extinguishing media
Suitable extinguishing media:
Carbon dioxide extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture
No data available

Advice for firefighters
Precautionary Measures Fire: Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
Firefighting Instructions: Exercise caution when fighting any chemical fire.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Hazardous Combustion Products: No further information available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
General Measures: Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust or fumes. Avoid skin and eye contact.
For Non-Emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).

**For Emergency Personnel**
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Ventilate area.

**Environmental precautions**
Do not allow product to reach sewage system or any water course.

**Methods and material for containment and cleaning up**
Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Keep away from moist and water.

**Other Information**
No further information available.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for safe handling**
Avoid spills and clean them up when they occur. Wash hands thoroughly after use. Normal measures for preventive fire protection.

**Conditions for safe storage, including any incompatibilities**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Avoid storage near water and keep away from moist.

**Specific end use(s)**
No additional information available.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of material with critical values that have to be monitored at the workplace.

**Additional information:**
No additional information available.
**Exposure controls**

**Appropriate Engineering Controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Respiratory protection**
Not required under normal conditions of use.
Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Hand protection**
Not required under normal conditions of use. Wash with water and soap and rinse thoroughly after use.

**Eye protection**
Not required under normal conditions of use.

**Skin and body protection**
Not required under normal conditions of use. Wash with water and soap and rinse thoroughly after use.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

**Appearance Form:** Granule

**Colour:** White

**Odor:** Odorless

**Odour Threshold:** No data available

**pH:** No data available

**Melting point/freezing point:** No data available

**Boiling point:** No data available

**Flash point:** No data available
**Ignition temperature**: No data available
**Autoignition temperature**: No data available
**Lower explosion limit**: No data available
**Upper explosion limit**: No data available
**Vapour pressure**: No data available
**Density**: No data available
**Solubility in Miscibility with water**: Insoluble
**Partition coefficient n-octanol/water**: No data available
**Evaporation rate**: No data available

**Other Information**
No additional information available.

### SECTION 10: STABILITY AND REACTIVITY

**Reactivity**: No dangerous reaction known under conditions of normal use.

**Chemical Stability**: Stable under recommended storage conditions.

**Possibility Of Hazardous Reactions**: No data available.

**Conditions To Avoid**: Store away from moist and water.

**Incompatible Materials**: No data available.

**Hazardous Decomposition Products**: No data available.

### SECTION 11: TOXICOLOGICAL INFORMATION

**Information on toxicological effects**

**Acute toxicity**
**LD50 Intravenous**: Not data available.
**Oral LD50**: Not data available.
**Inhalation LC50**: Not data available.
Skin corrosion/Irritation: Not data available.
Serious eye damage/Irritation: Not data available.
Respiratory or skin sensitisation: Not data available.
Germ cell mutagenicity: No data available.
Carcinogenicity:
This product has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.

Reproductive toxicity: No data available.
Specific target organ toxicity (single exposure): Not data available.
Specific target organ toxicity (repeated exposure): No data available.
Aspiration hazard: No data available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity
No data available.

Persistence and degradability
No data available.

Bioaccumulative potential
No data available.

Mobility
No data available.

PBT and vPvB assessment
No data available.

Other adverse effects
No data available.
**Additional ecological information**
No data available.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal of wastes:**
Dispose of product in accordance with national and local regulations.

**Contaminated packaging:**
Empty container should be taken to an approved waste handling site for recycling or disposal.

**Recommended cleansing agent:** Water. Use cleansing agents if necessary.

**SECTION 14: TRANSPORTATION INFORMATION**

**UN-Number (DOT, ADN, IMDG, IATA)**
Not regulated.

**UN proper shipping name (DOT, ADN, IMDG, IATA)**
Not dangerous hazards.

**Transport hazard class(es) (DOT, ADR, ADN, IMDG, IATA)**
Not regulated.

**Packing group (DOT, IMDG, IATA)**
Not regulated.

**Environmental hazards**
Not regulated.

**Special precautions for user**
Not applicable.
SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture.

SARA
Section 355(extremely hazardous substances):
None of the ingredients is listed.
Section 313(Specific toxic chemical listings):
None of the ingredients is listed.

California Proposition 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Cancerogenesis categories:
None of the ingredients is listed on EPA, IARC, NTP, TLV, NIOSH-Ca.

SECTION 16: OTHER INFORMATION

HMIS III Rating
Health: 0 Minimal hazard.
Flammability: 0 Minimal hazard.
Physical: 0 Minimal hazard.

NFPE Rating
Health hazard: 0 Minimal hazard.
Fire hazard: 0 Minimal hazard.
Reactivity hazard: 0 Minimal hazard.

Further information
This Product Safety Data Sheet is offered solely for your information, consideration and investigation. We provides no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. We urges persons receiving this information to make their own determination as to the information suitability for their particular application.
GHS SDS--CORNSTARCH

SECTION 1: IDENTIFICATION

Product Identifier
Product form: Substance
Substance name: Cornstarch
CAS NO.: 9005-25-8
Formula: (C6H10O5)n
EINECS number: 232-679-6
Synonyms: Starch.

Intended Use Of The Product
Use of the substance/mixture: Educational and science kits.

Name, Address, And Telephone Of Manufacturer/Supplier
XinXiang Alpha Manufacturing Ltd.
West Of Beihuan Road, Muye District, Xinxiang City, Henan Province, China
PostCode: 453003
E-mail: winni@chinaalpha.net
Emergency telephone No.: 86-373-2515705.

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS-US classification: Not classified.

Label elements
GHS-US Labelling: No labeling applicable
Hazard pictograms(GHS-US): Not applicable
Signal word(GHS-US): Not applicable
Hazard statements(GHS-US): Not applicable
Precautionary statements: Not applicable
**Potential Health Effects**

**Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.

**Skin:** Not expected to be harmful under normal conditions of use.

**Eyes:** May cause eye irritation if contact directly.

**Ingestion:** May be harmful if swallowed.

**Unknown Acute Toxicity (GHS-US)**
Not available

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**Substances**
Name: Cornstarch
CAS No: 9005-25-8

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>GHS-US classification</th>
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<td>(CAS No.)9005-25-8</td>
<td>100</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**SECTION 4: FIRST AID MEASURES**

**Description of first aid measures**

**General advice**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. Consult a physician.

**First-aid measures after inhalation:**
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

**First-aid measures after skin contact:**
Wash with water and soap and rinse thoroughly after use. Obtain medical attention if irritation occurs, develops or persists.
First-aid measures after eye contact:
Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

First-aid measures after ingestion:
Rinse mouth. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.

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

Indication of any immediate medical attention and special treatment needed
No information available.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture
Carbon oxides

Advice for firefighters
Precautionary Measures Fire: Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
Firefighting Instructions: Exercise caution when fighting any chemical fire.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Hazardous Combustion Products: Carbon oxides

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
General Measures: Handle in accordance with good industrial hygiene and
safety practice. Do not breathe dust or fumes. Avoid skin and eye contact.

**For Non-Emergency Personnel**
Protective Equipment: Use appropriate personal protection equipment (PPE).

**For Emergency Personnel**
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Ventilate area.

**Environmental precautions**
Prevent entry to sewers and public waters. Avoid release to the environment.

**Methods and material for containment and cleaning up**
Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**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.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for safe handling**
Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

**Conditions for safe storage, including any incompatibilities**
Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep away water and moisture.

**Specific end use(s)**
No information available.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:
No additional information available.

Exposure controls
Appropriate Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Respiratory protection
Respiratory protection is not required under normal usage. Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Hand protection
Hand protection is not required under normal usage. Wash with water and soap and rinse thoroughly after use.

Eye protection
Eye protection is not required under normal usage.

Skin and body protection
Skin and body protection is not required under normal usage. Wash with water and soap and rinse thoroughly after use.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Keep away from foodstuffs, beverages and food.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
Physical State : Solid powder
**Colour**: White  
**Odor**: None  
**Odour Threshold**: Not available  
**pH**: Not available  
**Melting point/freezing point**: Not available  
**Boiling point**: Not available  
**Flash point**: Not available  
**Ignition temperature**: Not available  
**Autoignition temperature**: Not available  
**Lower flammable limit**: Not available  
**Upper flammable limit**: Not available  
**Vapour pressure**: Not available  
**Density**: No data available  
**Solubility**: Soluble in water  
**Partition coefficient n-octanol/water**: No data available  
**Evaporation rate**: No data available  
**Explosion Data – Sensitivity to Mechanical Impact**: No data available  
**Explosion Data – Sensitivity to Static Discharge**: No data available

### SECTION 10: STABILITY AND REACTIVITY

**Reactivity**: Hazardous reactions will not occur under normal conditions.

**Chemical Stability**: Decomposes slowly on exposure to water (moisture).

**Possibility Of Hazardous Reactions**: Hazardous polymerization will not occur.

**Conditions To Avoid**: Avoid moisture or moist air.

**Incompatible Materials**: No data available.

**Hazardous Decomposition Products**: Hazardous decomposition products formed under fire conditions.-Carbon oxides

### SECTION 11: TOXICOLOGICAL INFORMATION

**Information on toxicological effects**
**Acute toxicity:**
LD50 Intraperitoneal - mouse - 6,600 mg/kg.

**Skin corrosion/irritation:** No data available.
**Serious eye damage/irritation:** No data available.
**Respiratory or skin sensitisation:** No data available.
**Germ cell mutagenicity:** No data available.
**Teratogenicity:** No data available.
**Carcinogenicity:** This product has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA, nor have any of its components.

**Reproductive toxicity:** No data available.
**Specific target organ toxicity (single exposure):** No data available.
**Specific target organ toxicity (repeated exposure):** No data available.
**Aspiration hazard:** No data available.

**Potential Health Effects**

**Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
**Skin:** Not expected to be harmful under normal conditions of use.
**Eyes:** May cause eye irritation if contact directly.
**Ingestion:** May be harmful if swallowed.

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**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity:** No additional information available.

**Persistence and degradability:**
No additional information available.

**Bioaccumulative potential:** No additional information available.

**Mobility in soil:** No additional information available.

**PBT and vPvB assessment:** No additional information available.
**Other adverse effects:** No additional information available.

**Additional ecological information:**
Do not allow undiluted production or large quantities of it to reach ground water, water course or sewage system. Avoid transfer into the environment.
SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product
Consult state, local or national regulations to ensure proper disposal.

Contaminated packaging
Disposal must be made according to official regulations.

SECTION 14: TRANSPORTATION INFORMATION

In accordance with DOT : Not dangerous goods.
In accordance with IMDG : Not dangerous goods.
In accordance with IATA : Not dangerous goods.
In accordance with TDG : Not dangerous goods.

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

OSHA Hazards : No known OSHA hazards

SARA 302 Components :
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components :
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards :
No SARA Hazards
Massachusetts Right To Know Components:
CAS-No. 9005-25-8

Pennsylvania Right To Know Components:
CAS-No. 9005-25-8

New Jersey Right To Know Components:
CAS-No. 9005-25-8

California Prop. 65 Components:
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

SECTION 16: OTHER INFORMATION

HMIS III Rating
Health: 0 Minimal hazard.
Flammability: 0 Minimal hazard.
Physical: 0 Minimal hazard.

NFPE Rating
Health hazard: 0 Minimal hazard.
Fire hazard: 0 Minimal hazard.
Reactivity hazard: 0 Minimal hazard.

Further Information
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