

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
 Product name : YODUO 5-0-0

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only
 Use of the substance/mixture : Fertilizer

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Rotam North America, Inc.
 4900 Koger Blvd., Suite #140
 Greensboro, NC 27407
msds@rotam.com

1.4. Emergency telephone number

Company Phone Number : 1-866-927-6826 (toll free); 1-366-346-8802
 Emergency Telephone : CHEMTREC: 1-800-424-9300
 POISON CONTROL CENTER: 1-800-222-1222
 NPIC: 1-800-858-7378

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

According to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Physical Hazard:	Flammable Liquids	3	H226
Health Hazard:	Eye Irritation	2A	H319
Environmental Hazard:	Aquatic - Chronic	2	H411

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

GHS Labeling Elements :

Hazard pictograms (CLP) :



Signal word (CLP) :

Warning

Hazardous ingredients :

zinc sulphate (anhydrous)

Hazard statements (CLP) :

H226 - Flammable liquid and vapor
 H319 - Causes serious eye irritation
 H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 - Keep container tightly closed.
 P240 - Ground/bond container and receiving equipment.
 P241 - Use explosion-proof electrical, lighting, ventilating equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P264 - Wash thoroughly after handling.
 P280 - Wear protective gloves, protective clothing, and eye protection.
 P273 - Avoid release to the environment.
 P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P370+P378 - In case of fire: Use carbon dioxide (CO2), D-powder, dry sand to extinguish.
 P391 - Collect spillage.
 P403+P235 - Store in a well-ventilated place. Keep cool.
 P501 - Dispose of contents/container in accordance with local regulations.



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2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to OSHA Hazard Communication Standard (29 CFR 1910.1200)
zinc sulfate heptahydrate	(CAS No) 7446-20-0 (EC no) 231-793-3 (EC index no) 030-006-00-9	6.3	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Disodium octoborate tetrahydrate	(CAS No) 12280-03-4	2.2	Not classified
Isopropyl alcohol	(CAS No) 67-63-0 (EC no) 200-661-7 (EC index no) 603-117-00-0	1-5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow breathing of fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Store away from other materials.



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6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink, smoke or use the toilet when using product. Wear protective gloves, clothing and eye protection. Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original containers only. Keep containers tightly closed when not in use. Store in a cool, dry well-ventilated area, away from children, feed and food products and seed. Store at ambient temperatures. Do not contaminate water, food, or feed by storage or disposal.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Dark brown

Odour : Mild characteristic odour

Odour threshold : No data available

pH : No data available

pH solution : 3.0– 5.0(0.4% water solution)

Relative evaporation rate (butylacetate=1) : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : 46°C

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : Non flammable

Vapour pressure : No data available

Relative vapour density at 20 °C : No data available

Density : 1.160g/ml

Solubility : No data available

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

Explosive properties : No data available

Oxidising properties : No data available

Explosive limits : No data available

9.2. Other information

No additional information available



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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified.

YODUO 5-0-0	
LD50 (oral)	>5000.000 mg/kg

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : 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
Potential adverse human health effects and symptoms : Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

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Persistence and degradability	Not established.

12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Do not reuse container. Dispose in a sanitary landfill or by other procedures approved by state and local authorities.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1993

14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, N.O.S.(Isopropyl alcohol)
Transport document description (ADR) : UN 1993 FLAMMABLE LIQUID, N.O.S., 3, III, (D/E)

14.3. Transport hazard class(es)

Class (ADR) : 3
Danger labels (ADR) : 3



14.4. Packing group

Packing group (ADR) : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Refer to CFR 40 to determine the information required for shipment of this product.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions
YODUO 5-0-0 is not on the REACH Candidate List

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. End of Safety Data Sheet