

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

PRODUCT NAME: Kapacity
DESCRIPTION: Agricultural Adjuvant

MANUFACTURED FOR: AgXplore International, LLC.
7035 State Hwy D
Parma, Missouri, USA, 63870

Telephone: (573) 357-4506

EMERGENCY CONTACT: In the event of chemical emergencies involving a spill, leak, fire exposure, or accident involving chemicals – call CHEMTREC (800) 424-9300

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification(s): Serious Eye Damage/Eye Irritation Category 1
Skin Corrosion/Irritation Category 2
Reproductive Toxicity Category 2
Specific Target Organ Systematic Toxicity (STOT) –
Repeated Exposure Category 2

GHS Hazard Symbols:



Signal Word: Danger

Hazard Statements: Causes skin irritation.
Causes Serious eye damage.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements:

Prevention: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Wear protective gloves/protective clothing
Wear protection for eyes and face.

Response: Skin: Wash with plenty of water.
Eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing for 15 minutes.
Immediately call a POISON CENTER or doctor/physician.

Storage: Store in a secure manner.

Disposal: Dispose of in accordance with local, regional, and international regulations.

Hazards Not Otherwise Classified:

Sulfur Dioxide given off by this product has been shown to cause breathing difficulties in asthmatics. May cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

Percentage of Components with Unknown Acute Toxicity:

Oral: 36%
Dermal: 51%
Inhalation Vapor: 51%
Inhalation Dust/Mist: 51%

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS #	Amount
Citric acid triammonim salt	3458-72-8	<20%
Magnesium Sulfate, Heptahydrate	10034-99-8	<20%
Urea	57-13-6	<10%
Thiosulfuric acid (H ₂ S ₂ O ₃), potassium salt	100294-66-3	<5%
Manganese Sulfate Monohydrate	10034-96-5	<5%
Zinc Sulfate Monohydrate	7446-19-7	<5%
Ferrous Sulfate Monohydrate	7782-63-0	<5%
Boric acid (H ₃ BO ₃), compound with 2-aminoethanol	26038-87-9	<5%

SECTION 4. FIRST AID MEASURES

Description of first aid measures:

General advice: If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. GET MEDICAL ATTENTION IMMEDIATELY. Keep warm and quiet.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Wash with soap and water.

- Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention.
- Ingestion:** If swallowed, call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. If a large amount is swallowed, get medical attention.

Most Important Symptoms/Effects, Acute and Delayed:

- Eye Contact:** Causes mild to severe irritation. May cause: irritation, pain, swelling, tearing, light sensitivity, corneal burns. Effects depend on concentration and duration of exposure.
- Skin Contact:** May cause mild to moderate irritation. Contact may cause: irritation, redness, pain, sensitization.
- Skin Absorption:** May be absorbed through skin. Poorly absorbed through intact skin. May be absorbed through damaged skin. Effects may include those described for swallowing.
- Inhalation:** May cause moderate to severe irritation. May irritate: nose, throat, upper respiratory tract. Irritation may be severe. May cause: difficulty breathing, low blood pressure, dizziness, bluish skin color, lung congestion. Chronic exposure may cause: digestive disorders, reflex bronchoconstriction.
- Ingestion:** May cause mild to severe irritation. May cause: gastrointestinal irritation, gastrointestinal disturbances, abdominal pain, nausea, vomiting, diarrhea. Manganese poisoning, as described in inhalation, has been reported in persons drinking manganese-contaminated well water. May cause damage to: kidneys, liver. Symptoms of severe poisoning may occur within 30 minutes or be delayed for several hours. The average lethal dose of iron is about 200 to 250 mg per kg of body weight. Small amounts (e.g. a teaspoonful) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms.

Indication of Immediate Medical Attention and Special Treatment Needed: Treatment is symptomatic and supportive. Observation only is required for adult ingestion in the range of 4-8 grams of boric acid. For ingestion of larger amounts, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine or blood are only useful for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment.

SECTION 5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water fog or fine spray, Dry chemical fire extinguishers, Carbon dioxide fire extinguishers, Foam.

Special Hazards Arising from the Chemical:

Fire and Explosion Hazard: None known. May be explosive when mixed with hypochlorites due to the formation of nitrogen trichloride which explode spontaneously in air. Reacts violently with chlorine bleach. Resultant product may explode. May burn but does not ignite readily.

Hazardous Combustion Products: Sulfur oxides. Ammonia. Carbon dioxide. Cyanuric acid. Biuret. Nitrogen oxides. Toxic and/or hazardous gases. Manganese oxides. Zinc oxides.

Special Protective Equipment and Precautions for Fire-Fighters: Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of the fire to avoid hazardous vapors and decomposition products. Run-off from fire control may cause pollution. Move containers from fire area if possible without hazard.

Hazardous Combustion Products: May include but are not limited to oxides of carbon, copper, and nitrogen.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit.

Methods and Materials for Containment and Clean Up: Shut off source of leak if safe to do so. Contain spill, place into drums for proper disposal. Soak up residue with inert absorbent material. Place in non-leaking containers for immediate disposal. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs. CAUTION: Spilled material may be slippery.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Store in a dry location. Keep containers tightly closed.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA Exposure Guidelines:

Component	Limits
Manganese Sulfate Monohydrate	5 mg/m ³ Ceiling (as Mn)

ACGIH Exposure Guidelines:

Component	Limits
Manganese Sulfate Monohydrate	0.02 mg/m ³ TWA (respirable particulate matter, as Mn); 0.1 mg/m ³ TWA (inhalable particulate matter, as Mn)
Ferrous Sulfate Heptahydrate	1 mg/m ³ TWA (as Fe)

Engineering Controls: Local exhaust ventilation, process enclosures, or other engineering controls are required when handling or using this product to avoid overexposure. Maintain adequate ventilation. Do not use in closed levels, monitoring should be performed regularly.

Individual Protection Measures:

Eye/Face Protection: Wear chemical safety goggles while handling this product. Wear additional eye protection such as a face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material.

Skin Protection: Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Chemical-resistant and impervious.

Respiratory Protection: Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If exposure limits are exceeded, wear: NIOSH-Approved respirator for dusts and mists. NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respirator protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

Other Protective Equipment: Eye-wash station. Safety shower. Protective clothing.

General Hygiene Conditions: Wash with soap and water before meal times and at the end of each work shift. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Odor	Mild ammonia odor
Color	Dark brown
pH (neat)	7.0-8.5
Freezing Point	0 °F
Melting Point	Not Determined
Boiling Point / Range	Not Determined
Specific Gravity (25°C)	1.26 at 25°C
Flash Point	Not Determined
Solubility in Water	Soluble
Viscosity	Not Determined
Odor Threshold	Not Determined
Evaporation Rate	Not Determined
Upper / Lower Flammability Limits	Not Determined
Vapor Pressure	Not Determined
Vapor Density	Not Determined
Partition Coefficient	Not Determined
Auto-Ignition Point	Not Determined
Decomposition Temperature	Not Determined
Density	10.5 lbs/gal

SECTION 10. STABILITY AND REACTIVITY

Reactivity: No data available.
Chemical Stability: Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under normal conditions. Urea will form urea nitrate when mixed with nitric acid at low pH. Urea nitrate may become unstable and/or explosive under certain conditions. Reacts with alkalines to form salts.

Conditions to Avoid: Avoid excessive heat.

Incompatible Materials:

Oxidizing agents: Halogens. Sodium nitrite. Phosphorus pentachloride. Nitrosyl perchlorate. Gallium perchlorate.

Reducing agents: Acids. Alkalies. Moisture. Copper or copper alloys.

Corrosive Effects on: Mild steel. Aluminum. Zinc. Copper. Ferrous metals and alloys.
Reacts with: Sodium hypochlorite or calcium hypochlorite to form nitrogen trichloride which may explode spontaneously with air. Metal hydrides.

Hazardous Decomposition Products: At very high temperatures, the following may be generated: Magnesium oxide. Sulfur oxides. Ammonia. Carbon dioxide. Cyanuric acid. Biuret. Nitrogen oxides. Some ammonia and carbon dioxide are given off on heating the aqueous product. Under some conditions of pressure and temperature, some ammonium cyanate has also been reported. Manganese oxides. Zinc oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Eyes. Ingestion. Inhalation. Skin. Absorption

Symptoms/Effects: Acute, Delayed, and Chronic:

Eye Contact: Causes mild to severe irritation. May cause: irritation, pain, swelling, tearing, light sensitivity, corneal burns. Effects depend on concentration and duration of exposure.

Skin Contact: May cause mild to moderate irritation. Contact may cause: irritation, redness, pain, sensitization.

Skin Absorption: May be absorbed through skin. Poorly absorbed through intact skin. May be absorbed through damaged skin. Effects may include those described for swallowing.

Inhalation: May cause moderate to severe irritation. May irritate: nose, throat, upper respiratory tract. Irritation may be severe. May cause: difficulty breathing, low blood pressure, dizziness, bluish skin color, lung congestion. Chronic exposure may cause: digestive disorders, reflex bronchoconstriction.

Ingestion: May cause mild to severe irritation. May cause: gastrointestinal irritation, gastrointestinal disturbances, abdominal pain, nausea, vomiting, diarrhea. Manganese poisoning, as described in inhalation, has been reported in persons drinking manganese-contaminated well water. May cause damage to: kidneys, liver. Symptoms of severe poisoning may occur within 30 minutes or be delayed for several hours. The average lethal dose of iron is about 200 to 250 mg per kg of body weight. Small amounts (e.g. a teaspoonful) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms.

Numerical Measures of Toxicity:

Component	Oral LD50	Dermal LD50	Inhalation LC50
Urea	Rat: 8471 mg/kg	No Data	No Data
Zinc Sulfate Monohydrate	Mouse: 1891 mg/kg	No Data	No Data
Ferrous Sulfate Heptahydrate	Mouse: 1520 mg/kg	No Data	No Data

Acute Toxicity Estimate (ATE)

Oral: 7907 mg/kg

Cancer Information:

This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.

Medical Conditions Aggravated by Exposure to Product: Impaired respiratory function.

Other: Chronic effects of ingestion: Reproductive effects have been reported in animals. Animal ingestin studies in several species, at high doses, indicate that borates cause reproductive and developmental effects. A human study of occupational exposure to borate dust showed no adverse effects on reproduction. No target organ has been identified in humans. High dose animal ingestion studies indicate the testes are the target organs in male animals.

SECTION 12. ECOLOGICAL INFORMATION

ENVIRONMENTAL IMPACT RATING: (0-4): No data available for this product.

Aquatic Acute Toxicity: No data available for this product.

DEGRADABILITY: No data available for this product.

BIOACCULULATION FACTOR (BCF): No data available for this product.

SECTION 13. DISPOSAL CONSIDERATIONS

Hazardous Waste Number: NA

Disposal Method: Dispose of in accordance with all local, state, and federal regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied.

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. If possible recover the product, otherwise dispose of in authorized landfill. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL.

SECTION 14. TRANSPORT INFORMATION

DOT Non-Bulk: Not Regulated

DOT Bulk: Not Regulated

Freight Classification: Fertilizing Compounds (Manufactured Fertilizers), NOI, Liquid (NMFC 68140, Sub 6; Class 70)

Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.

SECTION 15. REGULATORY INFORMATION

TSCA Inventory Status: All components of this product are on the TSCA inventory or are exempt from TSCA Inventory requirements.

SARA Title III Section 311/312 Category Hazards: Please see Section 2 of this SDS.

Regulated Components:	CAS	CERCLA	SARA	SARA	U.S.	WI	Prop
Component	Number	RQ	EHS	313	HAP	HAP	65
Citric acid triammonium salt	3458-72-8	No	No	Yes	No	No	No
Manganese Sulfate Monohydrate	10034-96-5	No	No	Yes	Yes	Yes	No
Zinc Sulfate Monohydrate	7446-19-7	Yes	No	Yes	No	No	No
Ferrous Sulfate Heptahydrate	7782-63-0	Yes	No	No	No	Yes	No

***Prop 65 – May Contain the Following Trace Components:**

No data available

Hazard Rating System

Health	Fire	Reactivity
2*	0	0

- = Chronic Health Hazard

NFPA

Health	Fire	Reactivity
2	0	0

SECTION 16. OTHER INFORMATION

Date of Preparation: 3/31/2019

The information above is believed to be accurate and represents the best information currently available to us.

However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

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