



*House and Garden® Multi Zyme*

<p><b>1. Identification of the Product and the Company</b></p> <p><b>Product Name</b> : Multi Zyme <b>Manufacturer</b> : House and Garden Inc. 4700 West End Rd. Arcata, CA 95521 USA <b>Emergency Phone</b> : House and Garden: (707) 382-9636 24-hour Poison Control Center: (800) 222-1222 24-hour HAZMAT Emergency Response: (888) 255-3924 <b>Recommended Use</b> : Liquid plant nutrient concentrate</p>
<p><b>2. Hazard(s) Identification</b></p> <p><b>Classifications:</b> Acute toxicity, Oral (Category 5) Acute toxicity, Dermal (Category 5)</p> <p><b>Pictograms:</b></p> <p></p> <p><b>Signal word:</b> Warning</p> <p><b>Hazard Statements:</b> H303 May be harmful if swallowed</p> <p><b>Precautionary Statements:</b> P102 Keep out of reach of children P261 Avoid breathing mist or spray P262 Do not get in eyes, on skin, or on clothing P264 Wash skin thoroughly after handling P281 Use personal protective equipment as required</p> <p><b>Storage:</b> Avoid overheating or storing in temperatures below 45°F (7.2°C).</p> <p><b>Disposal:</b> Dispose of contents and containers in accordance with all federal, state, and local regulations.</p>
<p><b>3. Composition / Information on Ingredients</b></p> <p><b>Chemical Description</b> : Mixture <b>Description</b> : Mixture of compounds listed below. <b>Hazardous Ingredients</b> : Phosphoric Acid* (CAS Number: 7664-38-2) Nitric Acid* (CAS Number: 7697-37-2) Potassium Hydroxide* (CAS Number: 1310-58-3)</p> <p>*Percent concentrations withheld because they are a trade secret.</p>
<p><b>4. First Aid Measures</b></p> <p><b>Inhalation</b> : Symptoms may include coughing or dyspnoea. Move person to fresh air. If person is not breathing, contact local emergency services and then give artificial respiration. Call a doctor or poison control center for treatment advice.</p>



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Skin	: Symptoms may include skin irritation. Remove contaminated clothing, thoroughly wash exposed area with water and soap for 15 minutes. Call a doctor or poison control center for treatment advice if symptoms persist.
Eyes	: Irritant. Hold eye open and rinse gently with water for at least 15 minutes, ensuring to flush underneath the eyelids. Call a doctor or poison control center for treatment advice.
Ingestion	: Gastro-intestinal irritant. Call a doctor or poison control center for immediate treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless advised to do so by a medical professional. Do not give anything by mouth to an unconscious person.
First Aid Facilities	: Water, wash facilities
<b>5. Fire Fighting Measures</b>	
Extinguishing Media	: The product itself is not combustible; in case of fire in its immediate environment, preferred extinguishing media are water spray, foam, CO <sub>2</sub> , dry ice.
Unsuitable Extinguishing Media	: Water jet.
Hazards from combustion of the product	: Decomposes on heating. Combustion can produce toxic fumes and irritating nitrate gases.
Protective equipment	: In case of fire, wear a self-contained breathing apparatus and eye protection.
<b>6. Accidental Release Measures</b>	
Emergency Procedures	: Ensure adequate ventilation. Wear safety glasses and appropriate gloves. Chemical-resistant gloves are needed for the sustained contact. Disposable nitrile gloves are adequate for incidental contact (rinse hands after removing gloves). Prevent product from entering sewer drains or surface waters.
Personal Precautions	: Avoid contact with skin and eyes.
Containment and Cleanup, Materials, Methods, Procedure	: Stop the source of the spill. Control the spill using floor dry, absorbent materials booms/socks, or towels. Clean up the spill using absorbent. Disposal subject to all applicable federal, state, and local regulations.



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**7. Handling & Storage**

Handling:

Keep out of reach of children. Not for internal use. Avoid contact with skin and eyes. Irritates the skin, mucous membranes, eyes and gullet. Wear suitable protective clothing.

In case of contact with skin or eyes, wash immediately with plenty of water.

Technical precautions: safety shower and eye shower stations.

Store at a temperature between 7 and 30 degrees Centigrade.

Storage:

Storage conditions: Take all necessary precautions to prevent contamination in case of damaged containers. Store the containers on drip trays or barrier material to prevent product from being discharged to the sewer or surface water. Avoid rough handling to ensure structural integrity.

**8. Exposure Control/Personal Protection**

Exposure and Threshold Limits		OSHA PEL		ACGIH TLV	
		ppm	mg/m <sup>3</sup>	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
	Phosphoric Acid	n/a	1	1	3
	Ammonium Nitrate	n/a	n/a	n/a	n/a
	Nitric Acid	2	5	2	4

**OSHA PEL:** Occupation Safety and Health Administration Permissible Exposure Limits

**ACGIH TLV:** American Conference of Governmental Industrial Hygienists threshold limit value

**TWA:** Time-weighted Average (for a conventional 8-hour workday)

**STEL:** Short Term Exposure Limit (a 15-minute, time-weighted average concentration to which workers may be exposed up to four times per day with at least 60 minutes between successive exposure)

Engineering Controls : Access to running water and an eye wash station.

Personal Protective Equipment:

Skin : Wear nitrile gloves when working with the product in case of incidental exposure. Promptly remove contaminated clothing and rinse skin for 15 minutes. Launder clothing before re-use.

Eyes : Wear safety glasses or goggles when working with this product in case of accidental splash or mist. Ensure an eye-wash station is near work area.

Respiratory : No special safety equipment needed. Avoid inhaling mists or fumes by using appropriate handling methods.

**9. Physical & Chemical Properties**

Appearance : Clear, dark orange-brown fluid

Upper flammability limit : Unavailable

Lower flammability limit : Unavailable

Odor : Faint herbaceous scent

Vapor Pressure : Unavailable

Odor Threshold : Unavailable

Vapor Density : Unavailable

pH : 7-8

Density : 1.10 – 1.15 kg/L at 30°C

Melting Point : Unavailable

Freezing Point : Unavailable

Solubility : Fully soluble

Boiling Point : Unavailable

Boiling Range : Unavailable

Crystallization temperature : <0°C

Flash Point : Unavailable

Evaporation Rate : Unavailable

Danger of Explosion : None.

Flammability : n/a

Auto-ignition Temperature : Material is not self-igniting.



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Decomposition Temperature : Unavailable  
Vapor Pressure : Unavailable  
Viscosity : Unavailable  
Partition Coefficient (n-octanol/water) : Unavailable

**10. Stability & Reactivity**

Chemical Reactivity : No reactivity anticipated. Poses little or no immediate hazard.  
Chemical Stability : Stable under normal conditions of use and storage. No stabilizers needed.  
Color change is not indicative of any safety issues.  
Conditions to Avoid : Do not expose to heat in excess of 200°C.  
Materials to Avoid : Metals and alkalis  
Suitable Materials : Plastics, PVC

**11. Toxicological Information**

Routes of Entry : Eye, skin contact, inhalation, and ingestion.  
Eyes : Immediate and delayed irritation, reddening in acute and chronic exposure.  
Skin : Immediate and delayed irritation. Long term exposure may cause skin degradation. Chronic exposure to be avoided.  
Inhalation : Fumes are not produced in standard environmental storage conditions. Fumes caused by fire contain nitrogen oxides, which are dangerous if inhaled, and can result in coughing, dyspnoea, drowsiness, unconsciousness, and death.  
Ingestion : Acute and chronic ingestion can result in abdominal pain, blue lips, blue fingernails, blue skin, convulsions, diarrhea, dizziness, burning sensations, vomiting, weakness, shock, collapse, and unconsciousness.  
LD50 : Unavailable  
Carcinogenic Properties : None of the mixture ingredients are listed on the National Toxicology Program Report on Carcinogens or on the International Agency for Research on Cancer Monographs.

**12. Ecological Information**

Ecotoxicity : There is no data specific to this product. It is potentially toxic the organisms in its concentrated form.  
Persistence and Degradability : Inherently biodegradable. Non-persistent.  
Mobility : Mobile in aqueous solutions.  
Bioaccumulation Potential : Chemicals will be held in vegetative material with no toxic effects to livestock or humans.  
Environmental Protection : Do not release into surface waters. Contamination can cause algae blooms and anoxic conditions, both of which are harmful to aquatic ecosystems.  
Leaching : Limited.



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<b>13. Disposal Information</b> Soiled containers : Rinse clean with water. Recycle if available. Remainders/unused product: Ensure that disposal is in compliance with all federal, state, and local regulations.
<b>14. Transport Information</b> Shipping Information : House and Garden Multi Zyme Harmonized System Commodity classification Code: 310590 Commodity Classification Standards Board : Code 70, non-hazardous
<b>15. Regulatory Information</b>  OSHA Hazards Phosphoric Acid Nitric Acid  OSHA Designated Carcinogens None of the ingredients are listed.  TSCA (Toxic Substances Control Act) None of the ingredients are listed.  USDOT Hazardous Materials None of the ingredients are listed.  EPA (List of Lists)/ SARA Phosphoric Acid Nitric Acid Potassium Hydroxide  NIOSH None of the ingredients are listed.
<b>16. Other Information</b>  The information provided in this Safety Data Sheet is to our best knowledge and belief, accurate and reliable as of the date compiled. However, no warranty or guarantee is made in this respect. It remains the user's responsibility to ensure the suitability and completeness of this information for a particular application. House and Garden Inc. does not accept liability for any damage or loss that may arise from the use of this information.  Last Modified: 12/14/2017 for conversion from MSDS to SDS 10/17/2018 to replace P280 with P281