

# SAFETY DATA SHEET

## FOLIZYME 15-0-2

### 1. Product and Company Identification

**Product Code:** Z-FZ 15-0-2  
**Product Name:** FOLIZYME 15-0-2  
**Trade Name:** FOLIZYME 15-0-2  
**Company Name:** Stoller  
9090 Katy Freeway  
Suite 400  
Houston, TX 77024  
**Phone Number:**  
1 (713)461-1493  
**Web site address:** www.stollerusa.com  
**Email address:** compliance@stollerusa.com  
**Emergency Contact:** CHEMTREC, In the US and Canada call 1 (800)424-9300  
CHEMTREC, From other countries call +1 (703)527-3887  
**Information:** 1 (800)539-5283

### 2. Hazards Identification

**Serious Eye Damage/Eye Irritation, Category 2**

**Acute Toxicity: Skin, Category 4**

**Acute Toxicity: Oral, Category 5**

**Skin Corrosion/Irritation, Category 2**



**GHS Signal Word:** **Warning**

**GHS Hazard Phrases:** H303 - May be harmful if swallowed.  
H312 - Harmful in contact with skin.  
H315 - Causes skin irritation.  
H319 - May cause eye irritation.

**GHS Precautionary Phrases:** P264 - Wash hands thoroughly after handling.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

**GHS Response Phrases:** P302+352 - IF ON SKIN: Wash with plenty of soap and water.  
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.  
P332+313 - If skin irritation occurs, get medical advice/attention.  
P337+313 - If eye irritation persists, get medical advice/attention.  
P362+364 - Take off contaminated clothing and wash it before reuse.

**GHS Storage and Disposal Phrases:** P501 - Dispose of contents/container to permitted waste facility.

**Potential Health Effects (Acute and Chronic):** Acute: Depending on the duration of contact, overexposure can irritate the eyes, skin, mucous membranes and any other exposed tissue.

**Inhalation:** Causes respiratory tract irritation.

**Skin Contact:** May be harmful if absorbed through skin.  
May cause skin irritation.

**Eye Contact:** Causes eye irritation.  
Causes redness and pain.

**Ingestion:** Harmful if swallowed. May cause irritation of the digestive tract. May cause nausea and vomiting.

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### 3. Composition/Information on Ingredients

CAS #	Components (Chemical Name)	Concentration	RTECS #
10043-35-3	Boric acid	< 0.5 %	ED4550000
7447-40-7	Potassium chloride	< 5.0 %	TS8050000
7646-85-7	Zinc chloride	< 1.0 %	ZH1400000
7786-30-3	Magnesium chloride	< 5.0 %	OM2800000
57-13-6	Urea	<15.0 %	YR6250000
10043-52-4	Calcium Chloride	<10.0 %	EV9800000
7447-39-4	Cupric chloride	< 0.5 %	GL7000000

### 4. First Aid Measures

<b>Emergency and First Aid Procedures:</b>	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
<b>In Case of Inhalation:</b>	Remove from exposure and move to fresh air immediately. If not breathing give artificial respiration. If breathing becomes difficult, call a physician.
<b>In Case of Skin Contact:</b>	Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Consult a physician.
<b>In Case of Eye Contact:</b>	Call a physician if irritation persists. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.
<b>In Case of Ingestion:</b>	Drink plenty of water. Call a physician or poison control center immediately for advice on inducing vomiting. Do not induce vomiting or give anything by mouth to an unconscious person.
<b>Indication of any immediate medical attention and special treatment needed:</b>	No data available.
<b>Note to Physician:</b>	Treat symptomatically and supportively.

### 5. Fire Fighting Measures

<b>Flash Pt:</b>	No data.	
<b>Explosive Limits:</b>	LEL: No data.	UEL: No data.
<b>Autoignition Pt:</b>	No data.	
<b>Suitable Extinguishing Media:</b>	Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	
<b>Fire Fighting Instructions:</b>	Wear self contained breathing apparatus for fire fighting if necessary. Further information: The product itself does not burn. No data available.	
<b>Flammable Properties and Hazards:</b>	Sulfur oxides, Manganese/manganese oxides. Copper oxides.	
<b>Hazardous Combustion Products:</b>	N.A.	

## 6. Accidental Release Measures

<b>Protective Precautions, Protective Equipment and Emergency Procedures:</b>	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.
<b>Environmental Precautions:</b>	If spilling or leakage occurs, contain and clean if safe to do so. Prevent from reaching drains, sewer, or waterways. Do not let product enter drains. Discharge into the environment must be avoided. Methods and materials for containment and cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Pick up and arrange disposal without creating dust. Sweep up and shovel.
<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	<p>Personal precautions. Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.</p> <p>Environmental precautions. If spilling or leakage occurs, contain and clean if safe to do so. Prevent from reaching drains, sewer, or waterways. Do not let product enter drains. Discharge into the environment must be avoided. Methods for cleaning up. Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.</p>

## 7. Handling and Storage

<b>Precautions To Be Taken in Handling:</b>	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. For precautions see section 2. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
<b>Precautions To Be Taken in Storing:</b>	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in a dry place. Store in a cool, dry place, away from food, feed, clothing materials and living quarters. Whenever possible, place chemicals on secondary containers or diked area. Inspect all incoming containers before storage to ensure all are properly labeled and not damaged. Keep containers tightly closed when not in use.
<b>Other Precautions:</b>	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## 8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
10043-35-3	Boric acid	No data.	TLV: 2 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>	No data.
7447-40-7	Potassium chloride	No data.	TLV: 10 mg/m <sup>3</sup>	No data.
7646-85-7	Zinc chloride	PEL: 1 mg/m <sup>3</sup>	TLV: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>	No data.
7786-30-3	Magnesium chloride	No data.	No data.	No data.
57-13-6	Urea	No data.	No data.	No data.
10043-52-4	Calcium Chloride	No data.	TLV: 10 mg/m <sup>3</sup>	No data.
7447-39-4	Cupric chloride	No data.	No data.	No data.

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<b>Respiratory Equipment (Specify Type):</b>	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.
<b>Eye Protection:</b>	Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses with side-shields conforming to EN166. Safety glasses.
<b>Protective Gloves:</b>	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
<b>Other Protective Clothing:</b>	Complete suit protecting against chemicals. Choose body protection according to the amount and concentration of the dangerous substance at the work place. Impervious clothing.
<b>Engineering Controls (Ventilation etc.):</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
<b>Work/Hygienic/Maintenance Practices:</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
<b>Environmental Exposure Controls:</b>	If spilling or leakage occurs, contain and clean if safe to do so. Prevent from reaching drains, sewer, or waterways. Do not let product enter drains. Discharge into the environment must be avoided.

## 9. Physical and Chemical Properties

<b>Physical States:</b>	[ ] Gas	[ X ] Liquid	[ ] Solid
<b>Appearance and Odor:</b>	Green color.		
<b>pH:</b>	~ 0.3 - 2.3		
<b>Melting Point:</b>	No data.		
<b>Boiling Point:</b>	No data.		
<b>Flash Pt:</b>	No data.		
<b>Evaporation Rate:</b>	No data.		
<b>Flammability (solid, gas):</b>	No data available.		
<b>Explosive Limits:</b>	LEL: No data.	UEL: No data.	
<b>Vapor Pressure (vs. Air or mm Hg):</b>	No data.		
<b>Vapor Density (vs. Air = 1):</b>	No data.		

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<b>Specific Gravity (Water = 1):</b>	~ 1.25 - 1.29
<b>Density:</b>	~ 10.6
<b>Solubility in Water:</b>	No data.
<b>Octanol/Water Partition Coefficient:</b>	No data.
<b>Autoignition Pt:</b>	No data.
<b>Decomposition Temperature:</b>	No data.
<b>Viscosity:</b>	No data.

### 10. Stability and Reactivity

<b>Reactivity:</b>	No data available.
<b>Stability:</b>	Unstable [ ] Stable [ X ]
<b>Conditions To Avoid - Instability:</b>	No data available.
<b>Incompatibility - Materials To Avoid:</b>	No data available.
<b>Hazardous Decomposition or Byproducts:</b>	Other decomposition products: No data available. In the event of fire: see section 5. Zinc/zinc oxides, Sulfur oxides.
<b>Possibility of Hazardous Reactions:</b>	Will occur [ ] Will not occur [ X ]
<b>Conditions To Avoid - Hazardous Reactions:</b>	No data available.

### 11. Toxicological Information

<b>Toxicological Information:</b>	Moderate eye irritation. Moderate skin irritation. CAS# 10043-35-3: Acute toxicity, LD50, Oral, Rat, 2660. MG/KG. Result: Gastrointestinal:Hypermotility, diarrhea. Gastrointestinal:Nausea or vomiting. ; Journal of the American Medical Association, American Medical Association, 535 N. Dearborn St., Chicago, IL 60610, Vol/p/yr: 128,266, 1945 CAS# 10043-52-4: Acute toxicity, LD50, Oral, Rat, 1.000 GM/KG. Result: Effects on Fertility: Abortion. ; Canadian Journal of Comparative Medicine and Veterinary Science., Vol/p/yr: 12,216, 1948 Acute toxicity, LD50, Intraperitoneal, Rat, 264.0 MG/KG. Result: Effects on Fertility: Abortion. ; Oyo Yakuri. Pharmacometrics., Oyo Yakuri Kenkyukai, CPO Box 180, Sendai 980-91 Japan, Vol/p/yr: 14,963, 1977 Acute toxicity, LDLO, Subcutaneous, Dog, 274.0 MG/KG. Result: Blood:Change in clotting factors. Blood:Changes in serum composition (e.g. Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels: Catalases. ; Abdernalden's Handbuch der Biologischen Arbeitsmethoden." (Leipzig, Ger. Dem. Rep.) Volume(issue)/page/year.:, Vol/p/yr: 4,1316, 1935 Tumorigenic Effects:, TDLo, Oral, Rat, 112.0 GM/KG, 20 W. Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Endocrine:Thyroid tumors. ; American Journal of Cancer., For publisher information, see CNREA8, New York, NY, Vol/p/yr: 23,550, 1935
<b>Sensitization:</b>	No data available.
<b>Carcinogenicity/Other Information:</b>	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than

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<b>Carcinogenicity:</b>	or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Mouse. Oral. Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Endocrine: Thyroid tumors.
	NTP? No      IARC Monographs? No      OSHA Regulated? No

### 12. Ecological Information

<b>Results of PBT and vPvB assessment:</b>	No data available. PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
<b>Persistence and Degradability:</b>	No data available.
<b>Bioaccumulative Potential:</b>	No data available.
<b>Mobility in Soil:</b>	No data available.
<b>Other adverse effects:</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life. Toxic to aquatic life. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. No data available.

### 13. Disposal Considerations

<b>Waste Disposal Method:</b>	PRODUCT: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Contaminated packaging: Observe all federal, state, and local environmental regulations. Dispose of as unused product.
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### 14. Transport Information

#### LAND TRANSPORT (US DOT):

**DOT Proper Shipping Name:** CORROSIVE LIQUID, N.O.S. (Contains Zinc chloride)  
**DOT Hazard Class:** 8                      CORROSIVE  
**UN/NA Number:** UN1760                      **Packing Group:** II



#### LAND TRANSPORT (European ADR/RID):

**ADR/RID Shipping Name:** CORROSIVE LIQUID, N.O.S.  
**UN Number:** 1760                      **Packing Group:** II  
**Hazard Class:** 8 - CORROSIVE

#### MARINE TRANSPORT (IMDG/IMO):

**IMDG/IMO Shipping Name:** CORROSIVE LIQUID, N.O.S. (Contains Zinc chloride)  
**UN Number:** 1760                      **Packing Group:** II  
**Hazard Class:** 8 - CORROSIVE

#### AIR TRANSPORT (ICAO/IATA):

**ICAO/IATA Shipping Name:** Non-Regulated. Trade Name: FOLIZYME 15-0-2 (Contains Zinc chloride)  
**UN Number:** 1760                      **Packing Group:** II  
**Hazard Class:** 8 - CORROSIVE

## 15. Regulatory Information

## 16. Other Information

**Revision Date:** 04/24/2020

**Additional Information About This Product:** No data available.

**This Product:**

**Company Policy or**

**Disclaimer:**

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