

**SAFETY DATA SHEET**

**1. PRODUCT & COMPANY IDENTIFICATION**

**Product Name:** eFOG-99<sup>®</sup> TBZ **EPA Reg# 64864-68**  
**Product Code:** 10484  
**Product Use:** Wettable Powder Fungicide for Post Harvest Treatment of Listed Pome Fruits  
**Product Restrictions:** For Agriculture Use Only  
**Manufacturer/Importer/Supplier/Distributor information**  
**Manufacturer:** Pace International, LLC  
**Address:** 5661 Branch Road, Wapato, WA 98951  
**Phone Number:** 800-936-6750 (Monday-Friday, 7:00 a.m. – 4:00 p.m.)  
**Medical Emergency Phone Number:** 888-271-4649 (PROSAR)  
**Transportation Emergency Phone Number:** 800-424-9300 (CHEMTREC)

**2. HAZARDS IDENTIFICATION**

**Classification:**  
 Physical Hazards, Not classified.  
 Acute Oral, Category 4  
 Acute Dermal, Category 4  
 Acute Inhalation, Category 4  
 Serious eye damage / eye irritation,  
 Category 2B  
 Environmental Hazards, Not classified.

**Hazard Symbols:**



**Signal Word:**  
 WARNING

**Hazard Statements:**  
 H302 Harmful if swallowed.  
 H312 Harmful in contact with skin.  
 H332 Harmful if inhaled.  
 H320 Causes eye irritation.

**Other Hazards:**  
**Hazard(s) not otherwise classified (HNOC):**

**Supplemental information**

**Precautionary Statements:**  
**Prevention Statements:**  
 P264 Wash hands thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P280 Wear protective clothing, chemical resistant gloves, and safety glasses. Fogging applicators must wear a NIOSH-approved full-face respirator with organic vapor filter.  
 P261 Avoid breathing fume/gas/mist/vapors/spray.  
 P271 Use only outdoors or in a well-ventilated area.  
**Response Statements:**  
 P301/312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
 P330 Rinse mouth.  
 P302/352 IF ON SKIN: Wash with plenty of soap and water.  
 P312 Call a POISON CENTER/doctor if you feel unwell.  
 P321 Specific treatments see Section 4 First Aid Measures on SDS.  
 P362/364 Take off contaminated clothing and wash it before reuse.  
 P304/340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P312 Call a POISON CENTER/doctor if you feel unwell  
 P305/351/338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337/313 If eye irritation persists: Get medical advice/attention.  
**Storage Statements:**  
 Store in a cool, dry area at room temperature and away from direct sunlight. Keep container tightly closed. Keep out of reach of children and livestock.  
**Disposal Statements:**  
 P501 Dispose of contents/container should be made in accordance with applicable regional, national and local laws and regulations.  
 None known.  
 None known.  
 This is a registered EPA product Reg # 64864-68. The product labeling is in compliance with EPA regulations and guidelines Refer to product label for further information.



### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS #</u>	<u>Concentration (w/w %)</u>
2-(4-thiazolyl)-benzimidazole (thiabendazole - TBZ)	148-79-8	98.75%

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. FIRST AID MEASURES

<b>General Advice:</b>	Have the product container, label or Safety Data Sheet with you when calling a poison control center or physician or going for treatment. You may also contact PROPHARMA (PROSAR) 1-888-271-4649 for emergency medical treatment information.
<b>If on Skin:</b>	Take off immediately all contaminated clothing. Wash skin with plenty of soap and water/shower for 15 – 20 minutes. Call a POISON CENTER/doctor for treatment advice. Wash contaminated clothing before reuse.
<b>If in Eyes:</b>	Hold eye open and cautiously rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses if present and easy to do after the first 5 minutes, then continue rinsing eye. Call a POISON CENTER/doctor for treatment advice.
<b>If Swallowed:</b>	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
<b>If Inhaled:</b>	Remove person to fresh air and keep comfortable for breathing. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
<b>Most important Symptoms / effects, acute and Delayed:</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Dusts may irritate the respiratory tract, skin and eyes. May cause redness and pain.
<b>Indication of any immediate medical attention and special treatment needed:</b>	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

### 5. FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media:</b>	Foam. Dry chemical powder. Carbon dioxide.
<b>Unsuitable Extinguishing Media:</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Special Hazards Arising from the Chemical:</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters:</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire-fighting equipment/instructions:</b>	Move containers from fire area if you can do so without risk. Water spray may be used to keep fire exposed containers cool.
<b>Specific methods:</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards:</b>	No unusual fire or explosion hazards noted. Not a fire hazard.
<b>Hazardous combustion products:</b>	May include and are not limited to: Oxides of carbon, oxides of nitrogen, oxides of sulfur, hydrogen chloride and hydrogen cyanide (hydrocyanic acid).

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures:</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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<b>Methods and materials for containment and cleaning up:</b>	Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Prevent entry into waterways, sewer, basements or confined areas.  Large Spills: Wet down with water and dike for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Shovel the material into waste container. Following product recovery, flush area with water.  Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions:</b>	DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes. DO NOT discharge effluent containing this product into sewer systems, lakes, streams, ponds, estuaries, oceans or other waters.

## 7. HANDLING & STORAGE

<b>Precautions for safe handling:</b>	It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Minimize dust generation and accumulation. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use good industrial hygiene practices in handling this material.
<b>Conditions for safe storage, including any incompatibilities:</b>	Store in a cool, dry area at room temperature and away from direct sunlight. Keep container tightly closed.  PESTICIDE STORAGE: Store in cool dry place.  Keep out of reach of children and livestock.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Occupational Exposure Limits:</b>	No exposure limits are indicated for the ingredient (s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear chemical goggles, safety glasses or face shield.
<b>Skin protection</b>	
<b>Hand protection</b>	Chemical-resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber, or butyl rubber
<b>Other</b>	Mixers, loaders, applicators and other handlers must wear: long-sleeved shirt, long pants, chemical resistant gloves, and shoes plus socks. Protective eyewear (such as goggles, safety glasses, or a face shield). A NIOSH-approved particulate respirator with any N, R or P filter with NIOSH approval number prefix TC-84A, or a NIOSH approved powered air purifying respirator with HE filter with NIOSH approval number prefix TC-21C.  In addition, fogging applicators must keep a respirator with an organic vapor removing cartridge readily available in case of rare instances where fog may be blown back to the applicator, such as equipment malfunction or insufficient room seal.
<b>Respiratory protection</b>	Mixers, loaders, applicators and other handlers must wear: A NIOSH-approved particulate respirator with any N, R or P filter with NIOSH approval number prefix TC-84A, or a NIOSH approved powered air purifying respirator with HE filter with NIOSH approval number prefix TC-21C.  In addition, fogging applicators must keep a respirator with an organic vapor removing cartridge readily available in case of rare instances where fog may be blown back to the applicator, such as equipment malfunction or insufficient room seal.
<b>Thermal hazards</b>	Not applicable.



**General hygiene considerations**

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Routinely wash protective equipment to remove contaminants.

**9. PHYSICAL & CHEMICAL PROPERTIES**

<b>Physical state:</b>	Fine Powder	<b>Vapor pressure:</b>	5.3 x 10 <sup>-4</sup> mPa (25°C)
<b>Appearance / Color:</b>	White	<b>Vapor density: (air =1)</b>	Not available
<b>Odor:</b>	Not available	<b>Relative density:</b>	1.32 – 1.36 (11.01 – 11.35 lb/gl)*
<b>Odor threshold:</b>	Not available	<b>Specific Gravity: (H<sub>2</sub>O = 1)</b>	Not available
<b>pH:</b>	6.4 – 7.4	<b>Solubility:</b>	In water 0.16 (pH 4), 0.03 (pH 7), 0.03 (pH 10) (all in g/L, 20°C). Log Pow=2.39 (pH 9, 25°C)
<b>Melting/Freezing point:</b>	566.6 – 568.4°F (297 - 298°C)	<b>Partition coefficient (n-octanol-water):</b>	Not available
<b>Pour Point:</b>	Not applicable	<b>Auto-ignition temperature:</b>	Not available
<b>Initial boiling point and boiling range:</b>	Not applicable	<b>Decomposition temperature:</b>	Not available
<b>Flash point:</b>	Not available	<b>Viscosity:</b>	Not available
<b>Evaporation rate:</b>	Not available	<b>Explosive properties:</b>	Not explosive
<b>Flammability (solid, gas):</b>	Not applicable	<b>Oxidizing properties:</b>	Not oxidizing
<b>Upper/Lower flammability limits:</b>	Not available	<b>Solubility (other):</b>	In n-heptane <0.01, xylene 0.13, methanol 8.28, 1,2-dichloroethane 0.81, acetone 2.43, ethyl acetate 1.49, n-octanol 3.91 (all in g/L, 20°C)

\*Listed density is an approximate value and does not necessarily represent that of a specific batch.

**10. STABILITY & REACTIVITY**

<b>Reactivity hazards:</b>	This product may react with strong oxidizing agents.
<b>Possibility of Hazardous Reactions:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical stability:</b>	Stable under recommended storage conditions.
<b>Conditions to avoid:</b>	Keep away from heat / hot surfaces / sparks / open flames / and other ignition sources. Do not mix with other chemicals.
<b>Incompatible materials:</b>	Acids, alkaline metals, isocyanates and oxidizers.
<b>Hazardous decomposition products:</b>	May include and are not limited to: Oxides of nitrogen, oxides of sulfur, oxides of carbon and hydrogen chloride.

**11. TOXICOLOGICAL INFORMATION**

<b>Routes of exposure</b>	<b>Eye, Skin contact, Inhalation, Ingestion.</b>	
<b>Information on likely routes of exposure</b>		
<b>Inhalation</b>	Dust may irritate respiratory system.	
<b>Skin corrosion / irritation:</b>	Harmful in contact with skin.	
<b>Eye damage / irritation:</b>	Causes eye irritation.	
<b>Ingestion</b>	Harmful if swallowed. May cause stomach distress, nausea or vomiting.	
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Irritation of eyes. May cause redness and pain. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Dusts may irritate the respiratory tract, skin and eyes.	
<b>Information on toxicological effects</b>		
<b>Components</b>	<b>Species</b>	<b>Test Results</b>
2-(4-thiazolyl)-benzimidazole (thiabendazole - TBZ) (CAS 148-79-8)		
<b>Acute Dermal LD50</b>	Rat	2080 mg/kg, RTECS
<b>Inhalation LC50</b>	Not available	
<b>Oral LD50</b>	Not available	
<b>Skin corrosion/irritation:</b>	Prolonged skin contact may cause temporary irritation.	
<b>Exposure minutes</b>	Not available	
<b>Erythema value</b>	Not available	



<b>Oedema value</b>	Not available
<b>Serious eye damage/eye irritation:</b>	Causes eye irritation.
<b>Irritation:</b>	
<b>Corneal opacity value</b>	Not available
<b>Iris lesion value</b>	Not available
<b>Conjunctival reddening value</b>	Not available
<b>Conjunctival oedema value</b>	Not available
<b>Recover days</b>	Not available
<b>Respiratory sensitization:</b>	Not a respiratory sensitizer.
<b>Skin sensitization:</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity:</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity:</b>	Not classified.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)</b>	Not listed
<b>Reproductive toxicity:</b>	Not available.
<b>Teratogenicity:</b>	Not available.
<b>Specific target organ toxicity - single exposure:</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure:</b>	Not classified.
<b>Aspiration hazard:</b>	Material does not present an aspiration hazard.
<b>Chronic effects:</b>	Non-hazardous by WHMIS/OSHA criteria.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.
<b>Persistence/ degradability:</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	
<b>Mobility in soil:</b>	No data available.
<b>Mobility in general:</b>	Not available.
<b>Other adverse effects:</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal instructions:</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.  PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.  CONTAINER DISPOSAL: Completely empty foil bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Dispose of foil bags and outer case in a sanitary landfill or by incineration, or, if allowed by State and Local Authorities, by burning. If burned, stay out of smoke.  Dispose in accordance with all applicable regulations.
<b>Local disposal Regulations</b>	
<b>Hazardous waste code:</b>	This product, in its original form and concentration, would not designate as a US federal hazardous waste when disposed.
<b>Waste from residues / unused products:</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging:</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.



**14. TRANSPORT INFORMATION**

	<u>DOT</u>
<b>UN number:</b>	UN3077
<b>Proper shipping name:</b>	Environmentally hazardous substances, solid, n.o.s. (Thiabendazole)
<b>Hazard class(es):</b>	9
<b>Packing group:</b>	III
<b>Marine Pollutant:</b>	IMDG Regulated Marine Pollutant.

**15. REGULATORY INFORMATION**

**US FEDERAL REGULATIONS**

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

This is an EPA registered product. The product labeling is in compliance with EPA regulations and guidelines.

EPA Reg. # 64864-68 EPA Est. # 64864-WA-1  
KEEP OUT OF THE REACH OF CHILDREN.

PRECAUTIONARY STATEMENTS:  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION:

Harmful if swallowed, inhaled, or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wear chemical resistant gloves and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using the toilet. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS: Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTANT WITH ITS LABELING. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR DISEASE CONTROL.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency Release Notification**

Not regulated.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

No

**SARA 311/312 Hazardous chemical**

Yes

**Classified Hazard Categories**

Acute toxicity (any route of exposure)  
Serious eye damage or eye irritation

**SARA 313 (TRI reporting)**

<b>Chemical name</b>	<b>CAS number</b>	<b>% by wt.</b>
2-(4-thiazolyl)-benzimidazole (thiabendazole - TBZ)	148-79-8	98.75



**OTHER FEDERAL REGULATIONS**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**US STATE REGULATIONS**

**US - Texas Effects Screening Levels: Listed substance**

2-(4-thiazolyl)-benzimidazole (thiabendazole - TBZ) Listed  
(CAS# 148-79-8)

**US. New Jersey Worker and Community Right-to-Know Act**

2-(4-thiazolyl)-benzimidazole (thiabendazole - TBZ)  
(CAS# 148-79-8)

**US. California Proposition 65**

Not listed.

**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**16. OTHER INFORMATION**

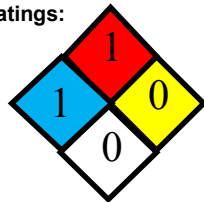
**HMIS Ratings:**

Health – 1

Flammability – 1

Reactivity – 0

**NFPA Ratings:**



The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, to the extent consistent with applicable law, Pace International, LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, to the extent consistent with applicable law, neither Pace International, LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. Except to the extent a particular use and particular information are expressly stated on the product label, it is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Pace International, LLC) to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use an EPA-registered pesticide product in a manner inconsistent with its labeling.

**SDS preparation date:** May 3, 2021      **Replaces MSDS dated:** May 26, 2015  
**Changes since last revision:** Several updates through-out SDS all sections.      **Version:** 2

