


Fervent® 475SC Fungicide

SECTION 1. IDENTIFICATION	
Product Name:	Fervent® 475SC Fungicide
Synonyms:	IKF-5412; IL-54111
Chemical Name:	Isfetamid; N-[1,1-dimethyl-2-[2-methyl-4-(1-methylethoxy)phenyl]-2-oxoethyl]-3-methyl-2-thiophenecarboxamide (CAS) + Tebuconazole; α -[2-(4-chlorophenyl)ethyl]- α -(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol (CAS)
Recommended Uses:	Agricultural industry: Fungicide
EPA Registration No.:	71512-31-88783
Company Identification:	Summit Agro USA LLC 240 Leigh Farm Road, Suite 415 Durham, NC 27707 (984) 260-0407
24 Hour Emergency Number:	For Transportation emergency, spills, leak, fire or accident call: CHEMTREC 1-800-424-9300 For Medical emergency call: 1-888-484-7546

SECTION 2. HAZARDS IDENTIFICATION*	
Hazard Classification:	Acute oral toxicity (Category 4) Acute aquatic toxicity (Category 2) Chronic aquatic toxicity (Category 2)
Signal Word:	WARNING
Hazard Symbols:	
Hazard Statements:	Harmful if swallowed. Toxic to aquatic life with long lasting effects.
Precautionary Statements:	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Rinse mouth and call a poison control center or doctor if you feel unwell. Avoid release to the environment. Collect spillage. Dispose of contents and container in accordance with the product label.
*According to OSHA criteria. For FIFRA criteria, see section 15	

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS			
Chemical Name:	CAS #:	% by Weight:	TLV/PEL:
Active Ingredient: Isfetamid	875915-78-9	25.0	Not established
Active Ingredient: Tebuconazole	107534-96-3	18.2	Not established

SECTION 4. FIRST-AID MEASURES

Ingestion: 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 to an unconscious person.

Skin Contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media: **SMALL FIRE:** Use water spray, dry chemicals, foam or carbon dioxide.
LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.

Unusual Fire and Explosion Hazards: May decompose under fire conditions emitting gases and vapors such as oxides of carbon and nitrogen, hydrogen sulfide, hydrogen cyanide and hydrogen chloride which may be toxic and irritating to the respiratory tract.

Fire Fighting Instructions: Wear full firefighting turn-out gear and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Precautionary Measures: Use protective equipment and engineering controls identified in section 8 of this document.

Containment and Clean-Up: Contain spill. Remove as much as possible and place in a closed, labeled container to await proper disposal. Wash spillage area with water. Do not allow wash water to enter drains or surface waters.

SECTION 7. HANDLING AND STORAGE

Precautions: Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Storage: Store in original container, in a secured, dry and cool place separate from other pesticides, fertilizer, food, and feed.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

The recommendations in this section for exposure controls and Personal Protection are intended for industrial settings (such as formulation or packaging facilities) or for other non-application situations.

For additional information, refer to the precautions/warnings on the product label. Always follow the label instructions when handling and using this product.

Exposure Limits: Not established.

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Ensure that eyewash stations and safety showers are near work areas.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)

Personal Protection:

Ingestion:	Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
Eye Contact:	Where eye contact is possible, use protective eyewear (such as chemical splash goggles or a face shield).
Skin Contact:	Where contact is likely, wear chemical-resistant gloves, long-sleeved shirt and long pants, socks and shoes.
Inhalation:	A respirator is not normally required when handling sealed containers. Use effective engineering controls to comply with facility occupational exposure limits. In case of emergency spills, use a NIOSH-approved respirator with particulate filter.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance:	Light beige liquid
Odor:	Slight odor
pH:	6.79 (1% suspension in water)
Boiling Point:	Not available
Melting Point:	Not available
Freezing Point:	Not available
Flash Point:	Not flammable
Evaporation Rate:	Not available
Flammability:	Not flammable
Flammable Limits:	Not applicable
Vapor Pressure:	Not available
Vapor Density:	Not available
Density:	1.10 g/mL @ 25°C
Solubility:	Suspensible in water
N-Octanol/Water:	Not available
Auto-Ignition Temperature:	Not available
Decomposition Temperature:	Not available
Volatility:	Not available

SECTION 10. STABILITY AND REACTIVITY

Reactivity:	No evidence of reactivity.
Stability:	This product is stable at normal temperatures over 12 months.
Possibility of Hazardous Reactions:	None known.
Conditions to Avoid:	Extremes of temperature.
Incompatible Materials:	Strong oxidizing agents, strong acids or bases.
Hazardous Decomposition Products:	Oxides of carbon and nitrogen, hydrogen sulfide, hydrogen cyanide, hydrogen chloride

SECTION 11. TOXICOLOGICAL INFORMATION	
Acute Toxicity:	Acute oral toxicity (LD ₅₀): 1750 mg/kg [Rat]. Acute dermal toxicity (LD ₅₀): > 5000 mg/kg [Rabbit]. Acute inhalation toxicity (LC ₅₀): > 2.05 mg/L [actual airborne concentration]; > 64.14 mg/L (nominal) 4 hour(s) [Rat].
Skin Irritation:	Non-irritating.
Eye Irritation:	Minimally irritating (EPA Category IV)
Sensitization:	Not a contact sensitizer.
Mutagenicity:	No evidence of mutagenicity.
Carcinogenicity:	Not carcinogenic based on tests conducted with isofetamid and tebuconazole.
Reproductive Toxicity:	No significant evidence of reproductive toxicity.
Target Organ Effects:	90-day feeding studies with isofetamid demonstrated increased liver weight and thyroid effects in rats exposed to extreme doses of 10,000 ppm. At 1000 ppm, increased liver weight was observed but the frequency of thyroid effects decreased significantly. 1-year and 2-year feeding studies on rats showed effects to liver and thyroid at doses of 5000 ppm.
Aspiration:	No data available.

SECTION 12. ECOLOGICAL INFORMATION	
Summary of Effects:	<p>Isofetamid is toxic to oysters. Tebuconazole is toxic to mammals, fish and aquatic invertebrates. DO NOT apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. DO NOT contaminate waters when disposing of equipment washwaters or rinsate. Ground Water Advisory: Tebuconazole is known to leach through soil into ground water under certain conditions.</p> <p>Surface Water Advisory: Tebuconazole may contaminate water through drift of spray in wind. Tebuconazole has a high potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to runoff that contains this product.</p>
Ecotoxicity Data:	<p><u>Isofetamid</u></p> <p>Fish (Rainbow Trout) 96-hour LC₅₀ = 2.27 mg/L Invertebrate (<i>Daphnia magna</i>) 48-hour EC₅₀ = 4.7 mg/L Algae (<i>Pseudokirchneriella subcapitata</i>) 96-hour E_rC₅₀ > 4.3 mg/L Bobwhite Quail Acute LD₅₀ > 2000 mg/kg body weight (practically non-toxic) Sub-Acute Dietary Bird LD₅₀ > 5000 ppm in diet for both Quail and Mallard</p> <p><u>Tebuconazole</u></p> <p>Fish (Rainbow trout) 96-hour LC₅₀: 4.4 mg/L Invertebrate (<i>Daphnia magna</i>) 48-hour EC₅₀ = 2.0 mg/L Algae (<i>Pseudokirchneriella subcapitata</i>) 96-hour E_rC₅₀ = 3.2 mg/L</p>
Persistence / Degradability:	Isofetamid has low to medium persistence in aerobic soil (DT ₅₀ 22 – 55 days) with much slower degradation under anaerobic conditions (DT ₅₀ 572 days). It does not show hydrolytic degradation at pH of 4 – 9 but degrades rapidly under photolytic conditions (DT ₅₀ 1.4 – 1.8 days).
Bioaccumulative Potential:	Not expected to be bioaccumulative.
Mobility in Soil:	Isofetamid exhibits low to medium mobility in soil. Tebuconazole is known to leach through soil into ground water under certain conditions.

SECTION 13. DISPOSAL CONSIDERATIONS	
Waste Disposal:	Pesticide wastes may be hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
Container Disposal:	Non-refillable container. DO NOT reuse or refill empty container. Triple rinse container promptly after emptying according to label instructions. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

SECTION 14. TRANSPORT INFORMATION		
US DOT Classification:	CLASS 9. Not regulated when shipped in non-bulk packaging by highway or rail.	
	Non-bulk (Ground Transport)	Bulk (Ground Transport)
Proper Shipping Name:	Not regulated	Environmentally Hazardous Substance, Liquid, N.O.S. (Isofetamid, Tebuconazole)
Hazard Class:	Not regulated	Class 9
Identification Number:	Not regulated	UN 3082
Packing Group:	Not regulated	PG III
Hazardous Substances Reportable Quantity:	Not applicable.	
Special Provisions for Transport:	Class 9 placard not required for non-bulk packaging transported by highway or rail within the U.S. [49CFR 172.504(f)(9)].	
	IATA (Air Transport)	IMDG (Ocean Transport)
Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (Isofetamid, Tebuconazole)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ISOFETAMID, TEBUCONAZOLE)
Hazard Class:	Class 9	CLASS 9
Identification Number:	UN 3082	UN 3082
Packing Group:	PG III	PG III

SECTION 15. REGULATORY INFORMATION	
U.S. Federal and State Regulations:	
SARA 313 Inventory Ingredients:	Not Listed
SARA 312 Hazards Classification:	Not Listed
Listed as carcinogen by:	
IARC:	Not Listed
NTP:	Not Listed
OSHA:	Not Listed
CA Prop 65:	Not Listed
TSCA:	Exempt from TSCA, subject to FIFRA.

SECTION 15. REGULATORY INFORMATION (Continued)

FIFRA:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law (FIFRA). FIFRA requirements differ from the OSHA classification criteria and hazard information required for safety data sheets in Section 2 above, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required by FIFRA on the pesticide label:

CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. This pesticide is toxic to oysters. DO NOT apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. DO NOT contaminate waters when disposing of equipment washwaters or rinsate. Do not apply when weather conditions favor drift from the treated areas. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

Canada (WHMIS): Exempt, regulated by PMRA

EU (Directives 67/548/EEC, 1999/45/EC and 2006/8/EC): R51/53: Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

SECTION 16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 0
Instability: 0

0 Minimal
1 Slight
2 Moderate
3 Serious
4 Extreme

Notice to Reader

All information contained in this Safety Data Sheet is furnished free of charge and is intended for your evaluation. In our opinion, the information as of the date of the Safety Data Sheet is reliable; however, it is your responsibility to determine the suitability of the information for your use. You are advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional or variable conditions or circumstances exist or because of applicable laws or government regulations. Therefore, you should use this information only as a supplement to other information gathered by you; and you must make independent determinations of the suitability and completeness of the information from all sources to assure both proper use of the material described herein and the safety and health of employees. Accordingly, no guarantee expressed or implied is made by ISK Biosciences Corporation as to the results to be obtained based upon your use of the information, nor does ISK Biosciences Corporation assume any liability arising out of your use of the information.

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