Safety Data Sheet

Conforms to UN Globally Harmonized System and OSHA Hazard Communication Standard 29 CFR 1910.1200(g)

ALLEGRO® 500F

SECTION 1. IDENTIFICATION

Product Name:	ALLEGRO 500F
Synonyms:	Altima®, Omega®, Shirlan®, and Shogun®
Chemical Name:	Fluazinam (3-chloro-*N*-[3-chloro-2,6-dinitro-4-trifluoromethyl]phenyl-5-trifluoromethyl-2-pyridinamine (CA))
Chemical Family:	Phenylpyridinylamine
Recommended Uses:	Agricultural industry: Fungicide
SDS No.:	33
Company Identification:	ISK Biosciences Corporation 7470 Auburn Road, Suite A Concord, OH 44077-9703 (440) 357-4640
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 inhalation toxicity (Category 4)
Skin irritation (Category 2)
Eye Irritation (Category 2B)
Skin sensitization (Category 1)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 2)

Signal Word: **WARNING**

Hazard Symbols:

Hazard Statements:
Harmful if inhaled. Causes skin irritation. Causes eye irritation. May cause an allergic skin reaction. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary Statements:
Avoid breathing mists/vapors/spray. Use only outdoors or in a well-ventilated area. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Collect spillage. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs, get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

*According to US OSHA and UN GHS criteria.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	CAS #:	% by Weight:	TLV/PEL:
Active Ingredient: Fluazinam*	79622-59-6	40	Not established
Propylene glycol	57-55-6	3 – 8	Not established
Hydrated amorphous silica	112926-00-8	0 – 3	10 mg/m^3

*3-chloro-*N*-[3-chloro-2,6-dinitro-4-trifluoromethyl)phenyl-5-trifluoromethyl-2-pyridinamine (CA)

SECTION 4. FIRST-AID MEASURES

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.
Skin Contact:	Remove contaminated clothing. Wash skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation:	Remove person from contaminated area to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration. Call a poison control center or doctor for treatment advice.
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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

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

Notes to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media:	**SMALL FIRE:** Use DRY chemicals, CO_2, water spray or foam. **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, 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 remove any contaminated soil. Place in closed, labeled container and store in a safe place to await proper disposal. Do not contaminate water while cleaning equipment or disposing of wastes.

SECTION 7. HANDLING AND STORAGE

Precautions:	Do not get on skin or clothing. Avoid contact with eyes. Avoid breathing spray mist. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before use. Do not take internally.
Storage:	Store in original container, in a secure, dry place separate from food and feed. Keep out of reach of children and domestic animals.

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 commercial applications and/or on-farm applications of this product refer to the precautions/warnings on the product label. Always follow the label instructions when handling and applying this product.

Exposure Limits:	Not established.
Engineering Controls:	Ensure adequate ventilation, especially in confined areas.
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 likely, use protective eyewear (such as chemical splash goggles).
Skin Contact:	Where contact is likely, wear chemical-resistant gloves (such as polyethylene, polyvinyl chloride (PVC), or nitrile rubber), coveralls over long-sleeved shirt and long pants, socks and chemical-resistant footwear.
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 any N, R, P or HE filter.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance:	Yellow liquid
Odor:	Pungent odor
pH:	5.8 @ 25℃ (1% aqueous solution)
Boiling Point:	Not available
Melting Point:	Not applicable
Freezing Point:	Not available
Flash Point:	Not applicable
Evaporation Rate:	Not available
Flammability:	Noncombustible
Flammable Limits:	Not available
Vapor Pressure:	1.7×10^{-7} mm Hg @ 25℃ (based on active ingredient)
Vapor Density:	Not determined
Density:	1.259 g/ml @ 25℃
Solubility:	0.07 – 0.14 ppm in water @ 20℃ (pH 7) (based on active ingredient)
N-Octanol/Water:	Log Pow = 3.56 to 4.03 (based on active ingredient)
Auto-Ignition Temperature:	Not available
Decomposition Temperature:	Not available
Volatility:	Not volatile

SECTION 10. STABILITY AND REACTIVITY

Reactivity:	No evidence of reactivity.
Stability:	This product is stable under normal use and storage conditions.

SECTION 10. STABILITY AND REACTIVITY (Continued)	
Possibility of Hazardous Reactions:	None known.
Conditions to Avoid:	Avoid contact with heat or open flame.
Incompatible Materials:	None known.
Hazardous Decomposition Products:	None known. May decompose under fire conditions to release vapors or gases which are toxic and irritating to the respiratory tract.

SECTION 11. TOXICOLOGICAL INFORMATION		
Acute Toxicity:	Acute oral toxicity (LD_{50}):	>5000 mg/kg [Rat].
	Acute dermal toxicity (LD_{50}):	>2000 mg/kg [Rabbit].
	Acute inhalation toxicity (LC_{50}):	>1.03 mg/L [actual airborne concentration]; >23 mg/L (nominal) 4 hour(s) [Rat].
Skin Irritation:	Moderate skin irritant.	
Eye Irritation:	Slight to moderate eye irritant.	
Sensitization:	Demonstrated potential to produce dermal sensitization.	
Mutagenicity:	No evidence of mutagenicity.	
Carcinogenicity:	Insufficient evidence to demonstrate human carcinogenic potential.	
Reproductive Toxicity:	Animal studies show no evidence of toxicity resulting from exposure to the active ingredient.	
Target Organ Effects:	Reversible weight changes were noted in the livers of rats that ingested the active ingredient for 13 weeks.	
Aspiration:	No data available.	

SECTION 12. ECOLOGICAL INFORMATION	
Summary of Effects: This product is toxic to fish and aquatic invertebrates.	
Ecotoxicity Data (Fluazinam):	
Fish (Rainbow Trout) 96-hour LC_{50} = 36 ppb (highly toxic)	
Invertebrate (*Daphnia magna*) 48-hour EC_{50} = 180 ppb (highly toxic)	
Green Algae 4-day EC_{50} = 0.18 ppm (highly toxic)	
Bobwhite Quail Acute LD_{50} = 1782 mg/kg (slightly toxic);	
Mallard Duck Acute LD_{50} = 4190 mg/kg (practically non-toxic)	
Sub-Acute Dietary (Mallard:>10600 ppm & Quail:>10500 ppm) (practically non-toxic)	
Persistence / Degradability:	Fluazinam appears to degrade at moderate to low rates in aerobic soils, but is more rapidly transformed into other compounds of similar structure in high pH solutions or in aerobic or anaerobic aquatic media.
Bioaccumulative Potential:	Fluazinam demonstrates potential to bioaccumulate in fish. (Octanol/water partition coefficient = 3.63×10^3 [Log Pow = 3.56])
Mobility in Soil:	Fluazinam is expected to have slight to low mobility in soil. Adsorption constants (K_{oc}) ranged from 1700 to 2300 in four tested soils.

SECTION 13. DISPOSAL CONSIDERATIONS	
Waste Disposal:	Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your regional pesticide or environmental control agency for guidance.

SECTION 13. DISPOSAL CONSIDERATIONS (Continued)

Container Disposal: Nonrefillable container. DO NOT reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. 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. (Since triple rinse instructions will vary slightly depending upon the size of the container, refer to the label of your container for specific instructions.)

SECTION 14. TRANSPORT INFORMATION

US DOT Classification: CLASS 9, Marine Pollutant. 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. (Fluazinam)
Hazard Class:	Not regulated	Class 9, Marine Pollutant
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. (Fluazinam)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FLUAZINAM)
Hazard Class:	Class 9	CLASS 9, MARINE POLLUTANT
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: Acute Health

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)

Canada (PMRA):	Registration No. 27517, Pest Control Products Act Refer to product label for precautionary language enforceable by PMRA.
Canada (WHMIS):	Exempt

SECTION 16. OTHER INFORMATION

NFPA Hazard Ratings	
Health:	2
Flammability:	1
Instability:	0

0	**Minimal**
1	**Slight**
2	**Moderate**
3	**Serious**
4	**Extreme**

Notice to Reader

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