

1. Identification

Product identifier	Envoke® Herbicide	
Other means of identification		
SDS number	715	
Product registration number	5481-684	
Recommended use	Herbicide.	
Recommended restrictions	See product label for restrictions. Keep out of the Reach of Children!	
EPA Registration number	EPA: 5481-684	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	AMVAC Chemical Corporation	
Address	4695 MacArthur Court Suite 1200 Newport Beach, CA 92660 United States	
Telephone	AMVAC Chemical Corp	949-260-1200
	AMVAC Chemical Corp	949-260-6270(FAX)
	Product Use	888-462-6822
Website	www.amvac.com	
E-mail	CustServ@amvac.com	
Emergency phone number	Medical	888-681-4261
	CHEMTREC® (USA+Canada)	800-424-9300
	CHEMTREC® (Outside USA)	+1-703-527-3887

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Sensitization, skin	Category 1B
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
OSHA defined hazards	Combustible dust	

Label elements



Signal word	Warning
Hazard statement	May cause an allergic skin reaction. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. May form combustible dust concentrations in air.

Precautionary statement

Prevention	Wear protective gloves. Avoid breathing dust/mist/spray. Avoid release to the environment. Contaminated work clothing must not be allowed out of the workplace.
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Response	If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Collect spillage. Wash contaminated clothing before reuse.
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Storage	Not assigned.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	This 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 in section 15. The pesticide label also includes other important information, including directions for use.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-Pyridinesulfonamide, N-[[[(4,6-dimethoxy-2-pyrimidinyl)amino]carbonyl]-3-(2,2,2-trifluoroethoxy)-], Monosodium Salt	Trifloxysulfuron-sodium	199119-58-9	75
Diatomaceous Earth		61790-53-2	< 10*
Surfactant*		Proprietary*	< 5*

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison center or doctor/physician for further treatment advice.
Skin contact	Remove contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Call the Poisons Information Center or a doctor for treatment advice.
Eye contact	Rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Call a physician or poison control center for treatment advice.
Ingestion	If swallowed: Immediately call a poison center or doctor/physician. Do not induce vomiting without advice from poison control center. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
Most important symptoms/effects, acute and delayed	Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Apply extinguishing media carefully to avoid creating airborne dust. Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	May form combustible dust concentrations in air.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Use only non-sparking tools. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Shovel or sweep up. Put material in suitable, covered, labeled containers.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Combustible dust clouds may be created where operations produce fine material (dust). Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654). Explosion-proof general and local exhaust ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-3 Permissible Exposure Limits (PEL) for Mineral Dusts (29 CFR 1910.1000)

Components	Type	Value	Form
Diatomaceous Earth (CAS 61790-53-2)	TWA	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
		0.8 mg/m ³	

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
Diatomaceous Earth (CAS 61790-53-2)	IDLH	3000 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
Diatomaceous Earth (CAS 61790-53-2)	TWA	6 mg/m ³

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Barrier laminate, Butyl rubber ≥14 mils, Nitrile Rubber ≥14 mils, Neoprene rubber ≥14 mils, Polyethylene, Polyvinyl chloride (PVC) ≥14 mils, or Viton ≥14 mils.

Other	Wear appropriate chemical resistant clothing. Long-sleeved shirt and long pants or coveralls, socks and closed toe shoes are required.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Granular.
Color	Grayish beige.
Odor	Faint odor. Phenolic.
Odor threshold	Not available.
pH	> 8 - < 12 (1% w/w dilution in deionized water)
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure	Not available.
Vapor density	Not available.
Relative density	> 0.6 - < 0.8

Solubility(ies)

Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.

Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

Other information The data presented in this section are typical values and should not be construed as a specification.

Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, sparks and open flame. Contact with incompatible materials. Minimize dust generation and accumulation.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
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Skin contact	May cause an allergic skin reaction. Slight skin irritant.
Eye contact	May be minimally irritating to eyes.
Ingestion	May cause discomfort if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
Envoke® Herbicide		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
<i>Dust</i>		
LC50	Rat	> 2.55 mg/l, 4 h
Oral		
LD50	Rat	> 5000 mg/kg

Skin corrosion/irritation Slightly irritating.

Serious eye damage/eye irritation Minimal effects that do not meet the threshold for classification.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Not expected to be mutagenic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Diatomaceous Earth (CAS 61790-53-2) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Components	Species	Test Results
2-Pyridinesulfonamide, N-[[[4,6-dimethoxy-2-pyrimidinyl]amino]carbonyl]-3-(2,2,2-trifluoroethoxy)-, Monosodium Salt (CAS 199119-58-9)		
Aquatic		
<i>Acute</i>		
Algae	EC50	Green algae (Selenastrum capricornutum) 0.029 mg/l, 72 h
	NOEC	Green algae (Selenastrum capricornutum) 0.0026 mg/l, 72 h
Crustacea	EC50	Water flea (Daphnia magna) > 108 mg/l, 48 h
Fish	LC50	Rainbow Trout (oncorhynchus mykiss) > 103 mg/l, 96 h

Components	Species	Test Results
<i>Chronic</i>		
Crustacea	NOEC	Water flea (<i>Daphnia magna</i>) 0.55 mg/l, 21 d
Fish	NOEC	Rainbow Trout (<i>Oncorhynchus mykiss</i>) 9.52 mg/l, 95 d
Persistence and degradability	Active Ingredient (a.i.): Not rapidly biodegradable.	
Bioaccumulative potential	Active ingredient (a.i.): Low bioaccumulation potential.	
Mobility in soil	Active Ingredient (a.i.): High mobility.	
Other adverse effects	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

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with all applicable 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).
Contaminated packaging	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

DOT

Not regulated as dangerous goods.

IATA

UN number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Trifloxysulfuron-Sodium)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	Yes
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed with restrictions.

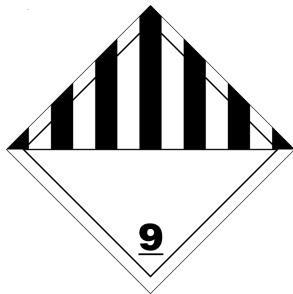
Cargo aircraft only Allowed with restrictions.

Read safety instructions, SDS and emergency procedures before handling.

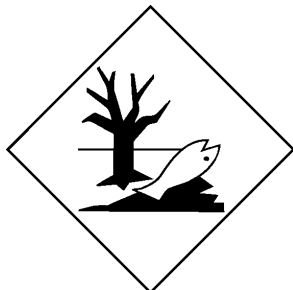
IMDG

UN number	UN3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Trifloxysulfuron-Sodium), MARINE POLLUTANT
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.



Marine pollutant



General information

IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

This 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. A portion of the hazard information required on the pesticide label, including the EPA mandated signal word, is reproduced below. The pesticide label also includes other important information, including restrictions and directions for use.

HAZARD TO HUMANS AND DOMESTIC ANIMALS.

CAUTION! Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

Toxic Substances Control Act (TSCA)

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.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categoriesCombustible dust
Respiratory or skin sensitization**SARA 313 (TRI reporting)**

Not regulated.

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.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations**California Proposition 65****WARNING:** This product can expose you to Crystalline Silica, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.**International Inventories****Country(s) or region****Inventory name****On inventory (yes/no)***

United States & Puerto Rico

Toxic Substances Control Act (TSCA) Inventory

No

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

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision**Issue date**

Aug-26-2021

Revision date

Mar-27-2023

Version #

2.0

Further information

Refer to:

OSHA 3371-08 2009, Hazard Communication Guidance for Combustible Dusts
NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids**HMIS® ratings**

Health: 2

Flammability: 2

Physical hazard: 0

NFPA ratings

Health: 2

Flammability: 2

Instability: 0

Disclaimer

This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is 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 (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

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NFPA is a trademark of the National Fire Protection Association, Inc.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.