Trifloxystrobin -MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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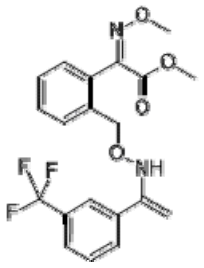
1. Chemical Product Identification

Product Name: Trifloxystrobin

Molecular Formula: C20H19F3N2O4

Molecular Weight: 408.37

Structural Formula:



Chemical Name:
Benzeneacetic acid, (E,E)- alpha-(methoxylmino)-2-((((1-(3-trifluoromethyl) phenyl)ethylidene)amino)oxy)methy)-,methyl ester

Form: powder

Color: white

Odor: odourless

CAS No.: **141517-21-7**

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Trifloxystrobin	**141517-21-7**	50
Other ingredients		50

3. Hazards Identification

Inhalation: Cough. Laboured breathing. Sore throat.

Skin contact: It caused some sensitisation

Eyes contact: It cause eye irritation if it is not rinsed out

Ingestion: May be fatal if swallowed.

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 physician or poison control center immediately. Skin contact: Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison controlcenter immediately.

Eyes 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 physician or poison control center immediately.

Ingestion: Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended

5. Fire-Fighting Measures

Fire and explosion:

Flash Point: 593.6F

Extinguishing media: Dry chemical, Foam, Carbon dioxide (CO2), Water. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing Evacuate personnel to safe areas. Avoid contact with spilled product or contaminated surfaces. Contain the spread of the fire-fighting media. Keep out of smoke. Do not allow run-off from fire fighting to enter drains or water courses. After fire is extinguished, do not turn on any ignition source until the area is determined to be free from explosion or fire hazard.

6. Accidental Release Measures

Consult an expert! Collect leaking and spilled liquid in sealed containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Sweep spilled substance into dry, sealed containers. Carefully collect remainder, then remove to safe place (extra personal protection: P3 filter respirator for toxic particles).

7. Handling And Storage

Handling: Always practice good industrial hygiene;handle with care ,avoid personal contact.Do not get into eyes or skin,do not breathe mist or vaporof product.do not swallow.wash hands with soap and water and rinse after handling product.shower after each shift.wash all work clothing and completely clean all PPE after each shift.

Storage: Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container. Store in a place accessible by authorized persons only.

8. Exposure Controls/Personal Protection

Repeated or prolonged contact with skin may cause dermatitis, abnormalities and loss of fingernails. Lungs may be affected by repeated or prolonged exposure to the aerosol.

General Protection Keep and wash PPE separately from other laundry. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables use detergent and warm/tepid water.
Eye/Face Protection Safety glasses with side-shields
Hand protection Chemical resistant nitrile rubber gloves
Body Protection Wear long-sleeved shirt and long pants and shoes plus socks. Coveralls
Respiratory protection When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations

9. Physical and Chemical Properties

Appearance: Grey to Beige Solid granules

Melting / Freezing Point : 70.9° C

Vapor pressure: 2.56E(-11)

pH: 9-11 (1% suspension in water)

10. Stability and Reactivity

stable to hydrolysis and is demonstrated to be thermally stable for 2 years The substance decomposes under influence of UV light producing toxic and corrosive fumes including nitrogen oxides, hydrogen chloride. Reacts with strong oxidants. Reacts with bases (hydrolysis). Unformulated products are corrosiveto common metals. Inactivated by inert clays and by anionic surfactants.

11. Toxicological Information

Acute Oral Toxicity. . . . . .: Male/Female Combined Rat:
LD50: >5,050 mg/kg
Acute Dermal Toxicity. . . . . .: Male/Female Combined Rat:
LD50: > 2,000 mg/kg

Acute Inhalation Toxicity. . . . . .: Male/Female Combined Rat: LC50: 4-hr exposure to dust: > 2.74 mg/1 (actual)
Male/Female Combined Rat: 1-hr exposure to dust (extrapolated from 4-hr LC50): > 10.96 mg/1 (actual).
Skin Irritation. . . . . .: Rabbit: slight dermal irritant.
Eye Irritation. . . . . .: Rabbit: Mild irritation to the cornea and conjunctiva was observed with all irritation clearing within 7 days post-treatment.
Sensitization. . . . . .: Guinea pig: Not a dermal sensitizer.
Sub-Chronic Toxicity. . . . . .: In a 28-day dermal toxicity study in rats, trifloxystrobin was tolerated without local effects at doses up to and including the limit dose of 1000 mg/kg/day.

Systemic effects were observed in males at the limit dose and included increased organ weights (liver and kidney).

Chronic Toxicity. . . . . .: In chronic toxicity studies in mice and dogs, the major primary target organ appears to be the liver following dietary administration of trifloxystrobin. Liver effects were not seen in a chronic toxicity rat study with trifloxystrobin.
Assessment Carcinogenicity. . .: Trifloxystrobin did not cause any treatment-related increase in general tumor incidence, any elevated incidence of rare tumors, or shortened time to the development of palpable or rapidly lethal tumors in an 18- month mouse and a 24-month rat study.
ACGIH NTP IARC OSHA
None None None None
Reproductive &
Developmental Toxicity. . . . . .: REPRODUCTION: In a two generation reproduction study using rats, trifloxystrobin was not a primary reproductive toxicant.
DEVELOPMENTAL TOXCITY: In a developmental toxicity stud- ies using rats and rabbits, trifloxystrobin was not a primary developmental toxicant.
Mutagenicity. . . . . .: Trifloxystrobin has been tested for its potential to induce gene mutation and chromosomal changes in 5 different test systems. Taken collectively, these studies demonstrate trifloxystrobin is not genotoxic or

mutagenic.

12. Ecological And Ecotoxicological Information

Environmental Precautions. . . .: This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal area below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.
Environmental Fate. . . . . : Ground Water Advisory:

Several trifloxystrobin degradates have properties and char- acteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are

permeable, particularly where the water table is shallow, may result in ground water contamination.

13. Disposal Considerations

Additional inform. : Trifloxystrobin is rapidly adsorbed and de-activated in soil. Observe all federal state and local environmental regulations. Permitted for hazardous waste.

14. Transport Information

Not applicable.

15. Regulatory Information

Not applicable.

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.