

SAFETY DATA SHEET



Transform® WG

Version 1.0 Revision Date: 08/22/2022 SDS Number: 800080002714 Date of last issue: -
Date of first issue: 08/22/2022

Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. IDENTIFICATION

Product name : Transform® WG

Manufacturer or supplier's details

COMPANY IDENTIFICATION

Manufacturer/importer : CORTEVA AGRISCIENCE LLC
9330 ZIONSVILLE RD
INDIANAPOLIS, IN, 46268-1053
UNITED STATES

Customer Information Number : 800-992-5994

E-mail address : customerinformation@corteva.com

Emergency telephone : INFOTRAC (CONTRACT 84224).
800-992-5994 or 317-337-6009

Recommended use of the chemical and restrictions on use

Recommended use : End use insecticide product

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Combustible dust

GHS label elements

Signal Word : Warning

Hazard Statements : May form combustible dust concentrations in air.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

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Components

Chemical name	CAS-No.	Concentration (% w/w)
sulfoxaflor (ISO)	946578-00-3	50
Kaolin	1332-58-7	>= 20 - < 25
Sodium N-methyl-N-oleoyltaurine	137-20-2	>= 1 - < 3
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	1317-70-0	>= 0.3 - < 1
Balance	Not Assigned	> 20

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- If inhaled : Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.
- In case of 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.
- In case of eye contact : Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.
- If swallowed : No emergency medical treatment necessary.
- Most important symptoms and effects, both acute and delayed : None known.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health. Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

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Combustion products may include and are not limited to:
Carbon oxides
Nitrogen oxides (NO_x)

- Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Avoid dust formation.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
- Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.
Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
Prevent from entering into soil, ditches, sewers, underwater.
See Section 12, Ecological Information.
- Methods and materials for containment and cleaning up : Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.
Pick up and arrange disposal without creating dust.
Recovered material should be stored in a vented container.
The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to over-pressurization of the container.
Keep in suitable, closed containers for disposal.
Sweep up or vacuum up spillage and collect in suitable container for disposal.
See Section 13, Disposal Considerations, for additional information.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice.

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- Smoking, eating and drinking should be prohibited in the application area.
Take care to prevent spills, waste and minimize release to the environment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
- Conditions for safe storage : Store in a closed container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in properly labeled containers.
Store in accordance with the particular national regulations.
- Materials to avoid : Strong oxidizing agents
- Packaging material : Unsuitable material: None known.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
sulfoxaflor (ISO)	946578-00-3	TWA (Inhalable particulate matter)	0.1 mg/m ³	ACGIH
Kaolin	1332-58-7	TWA (Respirable particulate matter)	2 mg/m ³	ACGIH
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
		TWA (Total dust)	10 mg/m ³	OSHA P0
		TWA (respirable dust fraction)	5 mg/m ³	OSHA P0
		PEL (respirable)	0.05 mg/m ³	OSHA CARC
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	1317-70-0	TWA	10 mg/m ³ (Titanium dioxide)	ACGIH

- Engineering measures** : Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

Personal protective equipment

- Respiratory protection : Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or

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guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

Hand protection

Remarks : Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

Eye protection : Use chemical goggles.

Skin and body protection : No precautions other than clean body-covering clothing should be needed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Granules.

Color : White

Odor : Mild

Odor Threshold : No data available

pH : 7.05 (76.6 °F / 24.8 °C)
 Concentration: 1 %
 Method: CIPAC MT 75.1
 GLP: yes

Melting point/range : No data available

Freezing point : Not applicable

Boiling point/boiling range : Not applicable

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : May form combustible dust concentrations in air.

Upper explosion limit / Upper flammability limit : Not applicable

Lower explosion limit / Lower flammability limit : Not applicable

Vapor pressure : Not applicable

Relative vapor density : Not applicable

Relative density : No data available

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Density : Not applicable

Bulk density : 0.42 g/cm³ (75.4 °F / 24.1 °C)
Method: CIPAC MT 33
GLP: yes

Solubility(ies)
Water solubility : No data available

Autoignition temperature : Method: EC Method A16
GLP: yes
none below 400 degC

Viscosity
Viscosity, kinematic : Not applicable

Explosive properties : Not explosive
Method: Mechanical Impact @ 20.25 inches
GLP: yes

Oxidizing properties : No significant increase (>5C) in temperature.
Method: EPA OPPTS 830.6314 (Oxidizing or Reducing Action)
GLP: yes

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : No decomposition if stored and applied as directed.
Stable under normal conditions.

Possibility of hazardous reactions : Stable under recommended storage conditions.
No hazards to be specially mentioned.
None known.

Conditions to avoid : None known.

Incompatible materials : Strong acids
Strong bases

Hazardous decomposition products : Decomposition products depend upon temperature, air supply and the presence of other materials.
Decomposition products can include and are not limited to:
Carbon oxides
Nitrogen oxides (NO_x)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 425
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute oral toxicity

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Acute inhalation toxicity : LC50 (Rat, male and female): > 5.35 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 402
Symptoms: No deaths occurred at this concentration.

Components:**sulfoxaflor (ISO):**

Acute oral toxicity : LD50 (Rat, female): 1,000 mg/kg
Remarks: Observations in animals include:
Muscle spasms or twitches.
Tremors.
Convulsions.

Acute inhalation toxicity : LC50 (Rat): > 2.09 mg/l
Test atmosphere: dust/mist
Symptoms: The LC50 value is greater than the Maximum Attainable Concentration., No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

Kaolin:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Sodium N-methyl-N-oleoyltaurine:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male): > 6.82 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute inhalation toxicity

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tion toxicity

Acute dermal toxicity : LD50 (Rabbit): 10,000 mg/kg

Skin corrosion/irritation**Product:**

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Components:**sulfoxaflor (ISO):**

Species : Rabbit
Result : No skin irritation

Kaolin:

Species : Rabbit
Result : No skin irritation

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Result : No skin irritation

Serious eye damage/eye irritation**Product:**

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

Components:**sulfoxaflor (ISO):**

Species : Rabbit
Result : No eye irritation

Kaolin:

Species : Rabbit
Result : No eye irritation

Sodium N-methyl-N-oleoyltaurine:

Species : Rabbit
Result : Eye irritation

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Result : No eye irritation

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Respiratory or skin sensitization**Product:**

Test Type : Local lymph node assay
Species : Mouse
Assessment : Does not cause skin sensitization.
Method : OECD Test Guideline 429

Assessment : Does not cause respiratory sensitization.

Components:**sulfoxaflor (ISO):**

Species : Mouse
Assessment : Does not cause skin sensitization.

Sodium N-methyl-N-oleoyltaurine:

Species : Guinea pig
Assessment : Does not cause skin sensitization.

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Remarks : Did not demonstrate the potential for contact allergy in mice. Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

Germ cell mutagenicity**Components:****sulfoxaflor (ISO):**

Germ cell mutagenicity - Assessment : In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

Sodium N-methyl-N-oleoyltaurine:

Germ cell mutagenicity - Assessment : In vitro genetic toxicity studies were negative.

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Germ cell mutagenicity - Assessment : In vitro genetic toxicity studies were negative in some cases and positive in other cases., Animal genetic toxicity studies were negative.

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Carcinogenicity**Product:**

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

Components:**sulfoxaflor (ISO):**

Carcinogenicity - Assessment : Has caused cancer in laboratory animals., However, the effects are species specific and are not relevant to humans.

Kaolin:

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Carcinogenicity - Assessment : Lung fibrosis and tumors have been observed in rats exposed to titanium dioxide in two lifetime inhalation studies. Effects are believed to be due to overloading of the normal respiratory clearance mechanisms caused by the extreme study conditions. Workers exposed to titanium dioxide in the workplace have not shown an unusual incidence of chronic respiratory disease or lung cancer. Titanium dioxide was not carcinogenic in laboratory animals in lifetime feeding studies.

IARC	Group 1: Carcinogenic to humans	
	Kaolin (Silica dust, crystalline)	1332-58-7
	Group 2B: Possibly carcinogenic to humans	
	titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	1317-70-0
OSHA	OSHA specifically regulated carcinogen	
	Kaolin (crystalline silica)	1332-58-7
NTP	Known to be human carcinogen	
	Kaolin (Silica, Crystalline (Respirable Size))	1332-58-7

Reproductive toxicity**Components:****sulfoxaflor (ISO):**

Reproductive toxicity - Assessment : In animal studies, has been shown to interfere with reproduction., However, the effects are species specific and are not relevant to humans., These concentrations exceed relevant human dose levels.
Has caused birth defects in lab animals at high doses., In laboratory animals, excessive doses toxic to the parent animals caused decreased weight and survival of offspring.,

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However, the effects are species specific and are not relevant to humans.

Sodium N-methyl-N-oleoyltaurine:

Reproductive toxicity - Assessment : Screening studies suggest that this material does not affect reproduction.

STOT-single exposure**Product:**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Components:**sulfoxaflor (ISO):**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Kaolin:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Sodium N-methyl-N-oleoyltaurine:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure**Product:**

Assessment : Evaluation of available data suggests that this material is not an STOT-RE toxicant.

Repeated dose toxicity**Components:****sulfoxaflor (ISO):**

Remarks : In animals, effects have been reported on the following organs:
Liver.

Kaolin:

Remarks : Repeated excessive exposure to crystalline silica may cause

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silicosis, a progressive and disabling disease of the lungs.

Sodium N-methyl-N-oleoyltaurine:

Remarks : Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Remarks : Repeated excessive inhalation exposures to dusts may cause respiratory effects.
In animals, effects have been reported on the following organs:
Lung.

Aspiration toxicity**Product:**

Based on physical properties, not likely to be an aspiration hazard.

Components:**sulfoxaflor (ISO):**

Based on physical properties, not likely to be an aspiration hazard.

Kaolin:

Based on physical properties, not likely to be an aspiration hazard.

Sodium N-methyl-N-oleoyltaurine:

Based on available information, aspiration hazard could not be determined.

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Based on physical properties, not likely to be an aspiration hazard.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 19.5 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates : EC50 (Midge (Chironomus riparius)): 0.48 mg/l
Exposure time: 96 h
Test Type: static test

EC50 (Daphnia magna (Water flea)): > 100 mg/l

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Exposure time: 48 h
 Test Type: semi-static test
 Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : ErC50 (diatom *Navicula* sp.): > 100 mg/l
 End point: Growth rate inhibition
 Exposure time: 72 h
 Test Type: Growth inhibition

Toxicity to soil dwelling organisms : LC50 (*Eisenia fetida* (earthworms)): 1.050 mg/kg
 Exposure time: 14 d
 End point: survival

Toxicity to terrestrial organisms : oral LD50 (*Colinus virginianus* (Bobwhite quail)): 1655 mg/kg bodyweight.

oral LD50 (*Apis mellifera* (bees)): 0.153 micrograms/bee
 Exposure time: 48 h

contact LD50 (*Apis mellifera* (bees)): 0.448 micrograms/bee
 Exposure time: 48 h

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Components:**sulfoxaflor (ISO):**

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 387 mg/l
 Exposure time: 96 h
 Test Type: static test
 Method: OECD Test Guideline 203 or Equivalent

LC50 (*Lepomis macrochirus* (Bluegill sunfish)): > 363 mg/l
 Exposure time: 96 h

EC50 (*Cyprinus carpio* (Carp)): > 402 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 399 mg/l
 Exposure time: 48 h
 Test Type: static test
 Method: OECD Test Guideline 202 or Equivalent

LC50 (*Chironomus* sp.): 0.622 mg/l
 Exposure time: 96 h

Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): > 100 mg/l
 Exposure time: 96 h
 Test Type: static test
 Method: OECD Test Guideline 201 or Equivalent

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ErC50 (Lemna gibba): > 100 mg/l
Exposure time: 7 d

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): > 12.9 mg/l
End point: mortality
Exposure time: 30 d
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 50.5 mg/l
End point: growth
Exposure time: 21 d
Test Type: semi-static test

NOEC (saltwater mysid Mysidopsis bahia): 0.114 mg/l
End point: number of offspring
Exposure time: 28 d
Test Type: flow-through test
Method: OECD Test Guideline 211 or Equivalent

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): 0.885 mg/kg

Toxicity to terrestrial organisms : dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5620 mg/kg bodyweight.

oral LD50 (Colinus virginianus (Bobwhite quail)): 676 mg/kg

oral LD50 (Apis mellifera (bees)): 0.146 micrograms/bee
Exposure time: 48 h

contact LD50 (Apis mellifera (bees)): 0.539 micrograms/bee
Exposure time: 48 d

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Sodium N-methyl-N-oleoyltaurine:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1.32 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5.76 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 197 mg/l
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 2 mg/l
Exposure time: 21 d

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titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Toxicity to fish : Remarks: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

NOEC mortality (Leuciscus idus (Golden orfe)): > 1,000 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test Type: static test

Persistence and degradability**Components:****sulfoxaflor (ISO):**

Biodegradability : Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 310
Remarks: Material is not readily biodegradable according to OECD/EEC guidelines.

ThOD : 1.90 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Rate constant: 1.653E-11 cm³/s
Method: Estimated.

Sodium N-methyl-N-oleoyltaurine:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent
Remarks: 10-day Window: Pass
Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Biodegradability : Remarks: Biodegradation is not applicable.

Bioaccumulative potential**Components:****sulfoxaflor (ISO):**

Partition coefficient: n-octanol/water : log Pow: 0.802 (68 °F / 20 °C)
pH: 7

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Method: Measured
 Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Sodium N-methyl-N-oleoyltaurine:

Partition coefficient: n-octanol/water : Pow: 1.36 (68 °F / 20 °C)
 Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Partition coefficient: n-octanol/water : Remarks: Partitioning from water to n-octanol is not applicable.

Balance:

Partition coefficient: n-octanol/water : Remarks: No relevant data found.

Mobility in soil**Components:****sulfoxaflor (ISO):**

Distribution among environmental compartments : Koc: 40
 Method: Measured
 Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Distribution among environmental compartments : Remarks: No data available.

Balance:

Distribution among environmental compartments : Remarks: No relevant data found.

Other adverse effects**Components:****sulfoxaflor (ISO):**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Kaolin:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

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Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Sodium N-methyl-N-oleoyltaurine:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Balance:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

Waste from residues : If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.
If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

SECTION 14. TRANSPORT INFORMATION
International Regulations

UNRTDG
UN number : UN 3077

SAFETY DATA SHEET



Transform® WG

Version 1.0 Revision Date: 08/22/2022 SDS Number: 800080002714 Date of last issue: -
Date of first issue: 08/22/2022

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Sulfoxaflor)
Class : 9
Packing group : III
Labels : 9

IATA-DGR

UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s. (Sulfoxaflor)
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 956
Packing instruction (passenger aircraft) : 956

IMDG-Code

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Sulfoxaflor)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes
Remarks : Stowage category A

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Further information

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA Special provision A197, and ADR/RID special provision 375.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : Combustible dust

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SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

Kaolin

1332-58-7

California Prop. 65

WARNING: This product can expose you to chemicals including Kaolin, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

The ingredients of this product are reported in the following inventories:

TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

Federal Insecticide, Fungicide and Rodenticide Act

EPA Registration Number : 62719-625

This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

DANGER

Corrosive. Causes irreversible eye damage
Harmful if swallowed

SECTION 16. OTHER INFORMATION

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
OSHA CARC : OSHA Specifically Regulated Chemicals/Carcinogens
OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA : 8-hour, time-weighted average

SAFETY DATA SHEET



Transform® WG

Version	Revision Date:	SDS Number:	Date of last issue: -
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OSHA CARC / PEL : Permissible exposure limit (PEL)
OSHA P0 / TWA : 8-hour time weighted average
OSHA Z-1 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 08/22/2022

Product code: GF-2372

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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