

SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

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 : Zest™ WDG

Manufacturer or supplier's details

COMPANY IDENTIFICATION

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

Customer Information Number : 1-800-258-3033

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 : Herbicide

Restrictions on use : Do not use product for anything outside of the above specified uses.

SECTION 2. HAZARDS IDENTIFICATION

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

Carcinogenicity : Category 1A

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H350 May cause cancer.

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SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Storage:
P405 Store locked up.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Nicosulfuron	111991-09-4	75
Barden Clay	1332-58-7	$\geq 10 - < 20$
Sucrose	57-50-1	$\geq 3 - < 10$
Alkyl naphthalenesulfonic acid, polymer with formaldehyde, sodium salt	68425-94-5	$\geq 3 - < 10$
Benzenesulfonic acid, dodecyl-, branched, sodium salt	69227-09-4	$\geq 1 - < 3$
Quartz	14808-60-7	$\geq 0.1 - < 0.3$
Balance	Not Assigned	> 10

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Never give anything by mouth to an unconscious person.

If inhaled : If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Call a poison control center or doctor for treatment advice.

In case of skin contact : Take off all contaminated clothing immediately.
Rinse skin immediately with plenty of water for 15-20 minutes.
Wash contaminated clothing before re-use.

In case of eye contact : Hold eye open and rinse slowly and gently with water for 15-20 minutes.

SAFETY DATA SHEET



Zest™ WDG

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03/14/2022	800080000796	Date of first issue: 03/14/2022

If swallowed	:	Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. 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. Call a poison control center or doctor for treatment advice.
Most important symptoms and effects, both acute and delayed	:	None known.

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 firefighting 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.
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. Avoid breathing dust. 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.

SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

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

Local/Total ventilation : Use with local exhaust ventilation.
Advice on safe handling : Do not breathe vapors/dust.
Do not smoke.
Handle in accordance with good industrial hygiene and safety practice.
Avoid exposure - obtain special instructions before use.
Smoking, eating and drinking should be prohibited in the application area.
Do not get on skin or clothing.
Avoid inhalation of vapor or mist.
Avoid contact with skin and eyes.
Keep container tightly closed.
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 : Do not store near acids.
Strong oxidizing agents
Organic peroxides
Explosives
Gases

Packaging material : Unsuitable material: None known.

Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Barden Clay	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
Sucrose	57-50-1	TWA	10 mg/m ³	ACGIH
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
Quartz	14808-60-7	TWA (Respirable dust)	0.05 mg/m ³	OSHA Z-1
		TWA (respirable)	10 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO ₂ +5	OSHA Z-3
		TWA (Respirable particulate matter)	0.025 mg/m ³ (Silica)	ACGIH
		PEL (respirable)	0.05 mg/m ³	OSHA CARC

Engineering measures : Use only with adequate ventilation.

Personal protective equipment

Respiratory protection : Where there is potential for airborne exposures in excess of applicable limits, wear approved respiratory protection with dust/mist cartridge.

Hand protection

Remarks : Protective gloves

Eye protection : Wear safety glasses with side shields.
Additionally wear a face shield where the possibility exists for face contact due to splashing, spraying or airborne contact with this material.

Skin and body protection : Where there is potential for skin contact have available and wear as appropriate impervious gloves, apron, pants, and jacket.

Protective measures : All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated.

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

SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

using the toilet.
Avoid breathing dust or vapor.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	extruded granules
Color	:	clear, to, tan
Odor	:	slight
Odor Threshold	:	No data available
pH	:	3.9
Melting point/range	:	No data available
Freezing point	:	Not applicable
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Does not sustain combustion.
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
Density	:	0.53 g/cm ³
Bulk density	:	590 kg/m ³
Solubility(ies)	:	
Water solubility	:	dispersible
Autoignition temperature	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
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SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

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 : None.

Hazardous decomposition products : Decomposition products depend upon temperature, air supply
and the presence of other materials.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: US EPA Test Guideline OPP 81-1

Acute inhalation toxicity : LC50 (Rat): > 5.6 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: US EPA Test Guideline OPP 81-2

Components:

Nicosulfuron:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: US EPA Test Guideline OPP 81-1

Acute inhalation toxicity : LC50 (Rat): > 5.9 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: US EPA Test Guideline OPP 81-3
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: US EPA Test Guideline OPP 81-2
Assessment: The substance or mixture has no acute dermal toxicity

Barden Clay:

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

Sucrose:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

Alkylnaphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

Acute oral toxicity : LD50 (Rat): > 4,500 mg/kg

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

Acute oral toxicity : Remarks: Low toxicity if swallowed.
Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

LD50 (Rat): > 1,000 mg/kg
Method: Estimated.

Acute dermal toxicity : Remarks: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50 (Rabbit): > 1,000 mg/kg
Method: Estimated.

Quartz:

Acute oral toxicity : LD50 (Rat): > 11,000 mg/kg

Skin corrosion/irritation**Product:**

Species : Rabbit
Method : US EPA Test Guideline OPP 81-5
Result : No skin irritation

Components:**Nicosulfuron:**

Species : Rabbit
Method : US EPA Test Guideline OPP 81-5
Result : No skin irritation

Barden Clay:

Species : Rabbit
Result : No skin irritation

Sucrose:

Species : Rabbit
Result : No skin irritation

Alkylnaphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

Species : Rabbit
Result : No skin irritation

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

Result : Skin irritation

SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

Quartz:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Product:

Species : Rabbit
Result : No eye irritation
Method : US EPA Test Guideline OPP 81-4

Components:

Nicosulfuron:

Species : Rabbit
Result : No eye irritation
Method : US EPA Test Guideline OPP 81-4

Barden Clay:

Species : Rabbit
Result : No eye irritation

Sucrose:

Species : Rabbit
Result : No eye irritation

Alkyl-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

Species : Rabbit
Result : Eye irritation

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

Result : Corrosive

Quartz:

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitization

Product:

Test Type : Buehler Test
Species : Guinea pig
Method : US EPA Test Guideline OPP 81-6
Result : Did not cause sensitization on laboratory animals.

SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

Components:

Nicosulfuron:

Test Type : Buehler Test
Species : Guinea pig
Method : US EPA Test Guideline OPP 81-6
Result : Did not cause sensitization on laboratory animals.

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

Remarks : For skin sensitization:
Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:
No relevant data found.

Quartz:

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

Germ cell mutagenicity

Components:

Nicosulfuron:

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

Sucrose:

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

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

Germ cell mutagenicity - Assessment : In vitro genetic toxicity studies were negative., In vivo tests did not show genotoxic effects

Carcinogenicity

Components:

Nicosulfuron:

Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

Barden Clay:

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

Available data suggest that the material is unlikely to cause cancer.

SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

Quartz:

Carcinogenicity - Assessment : Human carcinogen.
Has caused cancer in humans.

IARC	Group 1: Carcinogenic to humans Barden Clay (Silica dust, crystalline)	1332-58-7
	Group 1: Carcinogenic to humans Quartz (Silica dust, crystalline)	14808-60-7
OSHA	OSHA specifically regulated carcinogen Quartz (crystalline silica)	14808-60-7
NTP	Known to be human carcinogen Barden Clay (Silica, Crystalline (Respirable Size))	1332-58-7
	Known to be human carcinogen Quartz (Silica, Crystalline (Respirable Size))	14808-60-7

Reproductive toxicity

Components:

Nicosulfuron:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction., In animal studies, did not interfere with fertility.
Did not show teratogenic effects in animal experiments.

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

Reproductive toxicity - Assessment : In animal studies, did not interfere with fertility., In animal studies, did not interfere with reproduction.
Has caused birth defects in laboratory animals only at doses toxic to the mother.

STOT-single exposure

Product:

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

Components:

Nicosulfuron:

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

Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

Barden Clay:

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

Sucrose:

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

Alkyl naphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

Assessment : Available data are inadequate to determine single exposure specific target organ toxicity.

Quartz:

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

STOT-repeated exposure**Components:****Quartz:**

Target Organs : Lungs
Assessment : Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity**Components:****Nicosulfuron:**

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

Barden Clay:

Remarks : Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

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

Quartz:

Species : Rat
Application Route : Inhalation

Zest™ WDG

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03/14/2022	800080000796	Date of first issue: 03/14/2022

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

Aspiration toxicity**Product:**

No aspiration toxicity classification

Components:**Nicosulfuron:**

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

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

Barden Clay:

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

Alkyl-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

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

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

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

Quartz:

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)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 10 mg/l
Exposure time: 72 h
Method: Directive 67/548/EEC, Annex V, C.3.

SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

GLP: yes

ErC50 (Lemna gibba (duckweed)): 0.00341 mg/l
Exposure time: 336 h
Method: US EPA Test Guideline OPPTS 850.4400
GLP: yes

Components:

Nicosulfuron:

Toxicity to fish : Remarks: Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

LC50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
Exposure time: 96 h
Test Type: static test
Method: US EPA Test Guideline OPP 72-1
GLP: yes

LC50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
Exposure time: 96 h
Test Type: static test
Method: US EPA Test Guideline OPP 72-1
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test Type: static test
Method: US EPA Test Guideline OPP 72-2
GLP: yes

EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Test Type: static test
Method: US EPA Test Guideline OPP 72-2
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 71.17 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

EbC50 (Anabaena flos-aquae (cyanobacteria)): 41.8 mg/l
Exposure time: 96 h
Method: Directive 67/548/EEC, Annex V, C.3.
GLP: yes

ErC50 (Anabaena flos-aquae (cyanobacteria)): 59.8 mg/l
Exposure time: 96 h
Method: Directive 67/548/EEC, Annex V, C.3.
GLP: yes

SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

EC50 (Lemna gibba (duckweed)): 0.0032 mg/l
Exposure time: 7 d
Method: US EPA Test Guideline OPP 122-2 & 123-2
GLP: yes

ErC50 (Pseudokirchneriella subcapitata (green algae)): 71.17 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

EbC50 (Anabaena flos-aquae (cyanobacteria)): 41.8 mg/l
Exposure time: 96 h
Method: Directive 67/548/EEC, Annex V, C.3.
GLP: yes

ErC50 (Anabaena flos-aquae (cyanobacteria)): 59.8 mg/l
Exposure time: 96 h
Method: Directive 67/548/EEC, Annex V, C.3.
GLP: yes

EC50 (Lemna gibba (duckweed)): 0.0032 mg/l
Exposure time: 7 d
Method: US EPA Test Guideline OPP 122-2 & 123-2
GLP: yes

M-Factor (Acute aquatic toxicity) : 100
Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 24 mg/l
Exposure time: 90 d
Test Type: Early Life-Stage
Method: OECD Test Guideline 210
GLP: yes

NOEC (Oncorhynchus mykiss (rainbow trout)): 24 mg/l
Exposure time: 90 d
Test Type: Early Life-Stage
Method: OECD Test Guideline 210
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 43 mg/l
Exposure time: 21 d
Test Type: Static-Renewal
Method: OECD Test Guideline 202
GLP: yes

M-Factor (Chronic aquatic toxicity) : 10
Toxicity to terrestrial organisms : oral LD50 (Colinus virginianus (Bobwhite quail)): > 2,250 mg/kg
Method: US EPA Test Guideline OPP 71-1
GLP: yes

dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5,620 mg/kg

Zest™ WDG

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03/14/2022	800080000796	Date of first issue: 03/14/2022

Exposure time: 5 d
 Method: US EPA Test Guideline OPP 71-2
 GLP: yes

dietary LC50 (Anas platyrhynchos (Mallard duck)): > 5,620 mg/kg
 Exposure time: 5 d
 Method: US EPA Test Guideline OPP 71-2
 GLP: yes

oral LD50 (Apis mellifera (bees)): 0.050 mg/kg
 Exposure time: 48 h
 Method: OECD Test Guideline 213
 GLP: yes

oral LD50 (Apis mellifera (bees)): > 100 mg/kg
 Exposure time: 48 h
 Method: OECD Test Guideline 214
 GLP: yes

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

Sucrose:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
 Exposure time: 72 h
 Test Type: static test
 Method: Method Not Specified.

Benzenesulfonic acid, dodecyl-, branched, sodium salt:**Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Persistence and degradability**Components:****Nicosulfuron:**

Biodegradability : Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

Sucrose:

ThOD : 1.12 kg/kg

SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Concentration: 1,500,000 1/cm³
Rate constant: 1.1479E-10 cm³/s
Method: Estimated.

Bioaccumulative potential

Components:

Nicosulfuron:

Bioaccumulation : Remarks: Does not bioaccumulate.
Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: -1.15
Method: Estimated.
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Barden Clay:

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

Sucrose:

Bioaccumulation : Bioconcentration factor (BCF): 3
Method: Estimated.

Partition coefficient: n-octanol/water : Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Potential for mobility in soil is very high (Koc between 0 and 50).
log Pow: -3.7 - -3.67
Method: Estimated.
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Alkyl naphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

Partition coefficient: n-octanol/water : Remarks: No data available for this product.

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

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

Balance:

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

Zest™ WDG

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03/14/2022	800080000796	Date of first issue: 03/14/2022

Mobility in soil**Components:****Nicosulfuron:**

Distribution among environmental compartments : Koc: 33 - 51
Remarks: Under actual use conditions the product has a low potential of mobility in soil.

Koc: 33 - 51
Remarks: Under actual use conditions the product has a low potential of mobility in soil.

Sucrose:

Distribution among environmental compartments : Koc: 3.16
Method: Estimated.
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

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

Balance:

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

Other adverse effects**Components:****Nicosulfuron:**

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.

Barden Clay:

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.

Sucrose:

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.

Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

Alkyl-naphthalenesulfonic acid, polymer with formaldehyde, sodium salt:

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.

Benzenesulfonic acid, dodecyl-, branched, sodium salt:

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

SAFETY DATA SHEET



Zest™ WDG

Version 1.0 Revision Date: 03/14/2022 SDS Number: 800080000796 Date of last issue: -
Date of first issue: 03/14/2022

IATA-DGR

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

IMDG-Code

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.
(Nicosulfuron)
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 : Carcinogenicity

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.

Zest™ WDG

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03/14/2022	800080000796	Date of first issue: 03/14/2022

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; 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 : 03/14/2022

Product code: GF-3865

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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