

**DuPont™ Zest™ WDG herbicide**

Version 2.0

Revision Date 07/11/2016

Ref. 130000145713

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DuPont™ Zest™ WDG herbicide
Tradename/Synonym : NICOSULFURON (2-[[[4,6-Dimethoxypyrimidin-2-yl)aminocarbonyl]aminosulfonyl]- N,N-dimethyl-3-pyridinecarboxamide)

Product Use : Herbicide

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

Manufacturer/Supplier : DuPont
974 Centre Road
Wilmington, DE 19805, USA

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency : CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887) :

SECTION 2. HAZARDS IDENTIFICATION

Not classified as a hazardous substance or mixture according to the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard 2012.

Other hazards

Information presented in Section 2 conforms to the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state Regulatory Agencies.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Component	CAS-No.	Concentration
Nicosulfuron	111991-09-4	75 %
Modified Aromatic Sulfonate Salt		1 - 5 %
Other Ingredients		<=13.9 %

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

- General advice : Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
For medical emergencies involving this product, call toll free 1-800-441-3637.
See Label for Additional Precautions and Directions for Use.
Information presented in Section 4 conforms to the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state Regulatory Agencies.
- Inhalation : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.
- Skin contact : Take off all contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- Eye contact : Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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Ingestion	: 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. Do not give anything by mouth to an unconscious person.
Most important symptoms/effects, acute and delayed	: No applicable data available.
Protection of first-aiders	: No applicable data available.
Notes to physician	: No applicable data available.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Water spray, Dry chemical, Foam, Carbon dioxide (CO2)
Unsuitable extinguishing media	: High volume water jet, (contamination risk)
Specific hazards	: No applicable data available.
Special protective equipment for firefighters	: Wear full protective clothing and self-contained breathing apparatus.
Further information	: (on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers/tanks with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel)	: No applicable data available.
Environmental precautions	: Prevent material from entering sewers, waterways, or low areas.
Spill Cleanup	: Sweep up and shovel into suitable containers for disposal.
Accidental Release Measures	: No applicable data available.

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SECTION 7. HANDLING AND STORAGE

- Handling (Personnel) : 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 using the toilet. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing.
- Handling (Physical Aspects) : Keep away from heat and sources of ignition.
- Dust explosion class : No applicable data available.
- Storage : Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in original container. Store in a cool, dry place. Keep out of the reach of children.
- Storage period : No applicable data available.
- Storage temperature : No applicable data available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : Ensure adequate ventilation. Information presented in Section 8 conforms to the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state Regulatory Agencies.
- Personal protective equipment
- Skin and body protection : Applicators and other handlers must wear:
Long sleeved shirt and long pants
Chemical-resistant gloves, Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all greater than or equal to 14 mils
Shoes plus socks
Personal protective equipment required for early entry:
Coveralls
Chemical-resistant gloves, Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all greater than or equal to 14 mils
Shoes plus socks
- Protective measures : Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

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Exposure Guidelines
Exposure Limit Values

Nicosulfuron			
AEL *	(DuPont)	5 mg/m3	8 & 12 hr. TWA Respirable dust.

Modified Aromatic Sulfonate Salt
No applicable data available.

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	: solid
Form	: solid, dry, free flowing, water dispersible granules
Color	: light brown
Odor	: No applicable data available.
Odor threshold	: No applicable data available.
pH	: 3.9
Melting point/freezing point	: Melting point/range 141 - 144 °C (286 - 291 °F)
Boiling point/boiling range	: No applicable data available.
Flash point	: Not applicable
Evaporation rate	: No applicable data available.
Flammability (solid, gas)	: No applicable data available.

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Upper explosion limit	: No applicable data available.
Lower explosion limit	: No applicable data available.
Vapour Pressure	: No applicable data available.
Vapour density	: No applicable data available.
Density	: 0.53 g/cm ³
Specific gravity (Relative density)	: No applicable data available.
Bulk density	: loose
Water solubility	: dispersible
Solubility(ies)	: No applicable data available.
Partition coefficient: n-octanol/water	: No applicable data available.
Auto-ignition temperature	: No applicable data available.
Decomposition temperature	: No applicable data available.
Viscosity, kinematic	: No applicable data available.
Viscosity, dynamic	: No applicable data available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No applicable data available.
Chemical stability	: Stable at normal temperatures and storage conditions.
Possibility of hazardous reactions	: No applicable data available.
Conditions to avoid	: None reasonably foreseeable.
Incompatible materials	: No materials to be especially mentioned.
Hazardous decomposition products	: No applicable data available.

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SECTION 11. TOXICOLOGICAL INFORMATION

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- | | | |
|------------------------|---|--|
| Inhalation 4 h LC50 | : | > 5.6 mg/l , Rat |
| Dermal LD50 | : | > 2,000 mg/kg , Rabbit |
| Oral LD50 | : | > 5,000 mg/kg , Rat |
| Skin irritation | : | No skin irritation, Rabbit |
| Eye irritation | : | No eye irritation, Rabbit
Minimal effects that do not meet the threshold for classification. |
| Sensitisation | : | Animal test did not cause sensitization by skin contact., Guinea pig |
| Further information | : | Information presented in this Section conforms to the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state Regulatory Agencies. |
| Nicosulfuron | | |
| Repeated dose toxicity | : | Oral
Mouse
- 90 d
NOAEL: 300 mg/kg
No toxicologically significant effects were found.

Oral
Mouse
- 28 d
No toxicologically significant effects were found.

Oral
Rat
- 90 d
No toxicologically significant effects were found. |
| Carcinogenicity | : | Not classifiable as a human carcinogen.
Animal testing did not show any carcinogenic effects. |

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- Mutagenicity : Animal testing did not show any mutagenic effects.
Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
- Reproductive toxicity : No toxicity to reproduction
Animal testing showed no reproductive toxicity.
- Teratogenicity : Did not show teratogenic effects in animal experiments.

Carcinogenicity

The carcinogenicity classifications for this product and/or its ingredients have been determined according to HazCom 2012, Appendix A.6. The classifications may differ from those listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or those found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition).

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 12. ECOLOGICAL INFORMATION**Aquatic Toxicity****DuPont™ Zest™ WDG herbicide**

- 96 h LC50 : Oncorhynchus mykiss (rainbow trout) > 100 mg/l
- 72 h ErC50 : Pseudokirchneriella subcapitata (green algae) 12.2 mg/l
- 72 h NOEC : Pseudokirchneriella subcapitata (green algae) 2 mg/l
- 7 d NOEC : Lemna gibba (gibbous duckweed) 0.002 mg/l
- 7 d ErC50 : Lemna gibba (duckweed) 0.00341 mg/l
- 48 h EC50 : Daphnia magna (Water flea) > 100 mg/l

Nicosulfuron

- 90 d : NOEC Oncorhynchus mykiss (rainbow trout) 24 mg/l
- 21 d : NOEC Daphnia magna (Water flea) 43 mg/l

- Additional ecological information : Environmental Hazards: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean

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high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. Do not apply where/when conditions favour runoff.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods - Product : Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Waste disposal methods - Container : Refer to the product label for instructions.
Do not transport if this container is damaged or leaking.

In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

Contaminated packaging : No applicable data available.

SECTION 14. TRANSPORT INFORMATION

IATA_C	UN number	: 3077
	Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Nicosulfuron)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9MI
IMDG	UN number	: 3077
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nicosulfuron)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9

Not regulated as a hazardous material by DOT.

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SECTION 15. REGULATORY INFORMATION

Other regulations : This Safety Data Sheet is for a pesticide product registered by the US Environmental Protection Agency (USEPA) and various state regulatory agencies, and is therefore also subject to certain requirements under US and state pesticide laws, including the Federal Insecticide Fungicide and Rodenticide Act (FIFRA). These requirements differ from the classification criteria and hazard information required by OSHA for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is information determined by USEPA, and various states.

Caution

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes and clothing.

SARA 313 Regulated Chemical(s) : 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.

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Kaolin, Sucrose

EPA Reg. No. : 352-560
In the United States this product is regulated by the US Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

SECTION 16. OTHER INFORMATION

Revision Date : 07/11/2016

Contact person : DuPont Crop Protection, Wilmington, DE, 19805, Phone: 1-888-638-7668



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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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