

**DuPont™ Pastora® Herbicide**

Version 3.0

Issue Date : 03/18/2019
Revision Date : 02/07/2019

Ref. 130000043462

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™ Pastora® Herbicide
Tradename/Synonym : DPX-Q2A31 71.25WG Blend
NICOSULFURON (2-[[[(4,6-dimethoxypyrimidin-2-yl)aminocarbonyl]aminosulfonyl]-N,N-dimethyl-3-pyridinecarboxamide)
METSULFURON METHYL (Methyl 2-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate)

Product Use : Herbicide

Restrictions on use : This product is intended to be used as a pesticide

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 : +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

If you mill or grind this product you may change its toxicological properties.

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

| Component | CAS-No. | Concentration |
|--------------|-------------|---------------|
| Nicosulfuron | 111991-09-4 | 56.2 % |

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| | | |
|----------------------------------|------------|---------------|
| Metsulfuron methyl | 74223-64-6 | 15 % |
| Modified Aromatic Sulfonate Salt | | 1 - 5 % |
| Other Ingredients | | 23.4 - 28.2 % |

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.
- 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. Never 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.

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Notes to physician : No applicable data available.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO₂)

Unsuitable extinguishing media : No applicable data available.

Specific hazards : Not a fire or explosion hazard.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Further information : Evacuate personnel and keep upwind of fire. 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. Runoff from fire control may be a pollution hazard. Do not allow run-off from fire fighting to enter drains or water courses.

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) : Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Wear suitable protective equipment.

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 : Follow applicable Federal, State/Provincial and Local laws/regulations.

SECTION 7. HANDLING AND STORAGE

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- Handling (Personnel) : 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) : No applicable data available.
- 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 : When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. 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
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:
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

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instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Use this product in accordance with its label.

Exposure Guidelines
Exposure Limit Values

| Metsulfuron methyl | | | |
|---------------------------|----------|----------|----------------|
| AEL * | (DuPont) | 10 mg/m3 | 8 & 12 hr. TWA |

| Modified Aromatic Sulfonate Salt | | | |
|---|--|--|--|
| No applicable data available. | | | |

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

* 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
Color : light brown, tan

Odor : slight

Odor threshold : No applicable data available.

pH : 4.3 - 5.3

Melting point/range : No applicable data available.

Boiling point/boiling range : No applicable data available.

Flash point : No applicable data available.

Evaporation rate : No applicable data available.

Flammability (solid, gas) : No applicable data available.

Upper explosion limit : No applicable data available.

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Lower explosion limit : No applicable data available.
Vapour Pressure : No applicable data available.
Vapour density : No applicable data available.
Density : 0.54 - 0.66 g/cm³
Specific gravity (Relative density) : No applicable data available.
Water solubility : No applicable data available.
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 : No applicable data available.
Incompatible materials : None reasonably foreseeable.
Hazardous decomposition products : No applicable data available.

SECTION 11. TOXICOLOGICAL INFORMATION

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- Inhalation 4 h Acute toxicity estimate : > 5.4 mg/l , Rat
Dermal Acute toxicity estimate : > 5,000 mg/kg , Rabbit
Oral Acute toxicity estimate : > 5,000 mg/kg , Rat
- Skin irritation : No skin irritation, Rabbit
Minimal effects that do not meet the threshold for classification.
- 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 given is based on data on the components and the toxicology of similar products.
- 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 : Ingestion
multiple species
- 90 d
No toxicologically significant effects were found.
- Carcinogenicity : Not classifiable as a human carcinogen.
Animal testing did not show any carcinogenic effects.
- 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.
No effects on or via lactation
- Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Metsulfuron methyl

Repeated dose toxicity :

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The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Oral

Rat

-

Reduced body weight gain, Organ weight changes, Liver

Dermal

Rabbit

-

Skin irritation

Carcinogenicity : Not classifiable as a human carcinogen.
Did not show carcinogenic effects in animal experiments.

Mutagenicity : Animal testing did not show any mutagenic effects.
Did not cause genetic damage in cultured bacterial cells.
Genetic damage in cultured mammalian cells was observed in some laboratory tests but not in others.

Reproductive toxicity : No toxicity to reproduction
Animal testing did not show any effects on fertility.

Teratogenicity : Animal testing showed no developmental toxicity.

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).

| Material | IARC | NTP | OSHA |
|----------|------|-----|------|
| Kaolin | 1 | X | |
| Quartz | 1 | X | |

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity
Nicosulfuron


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96 h LC50 : Cyprinodon variegatus (sheepshead minnow) > 124 mg/l

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

14 d NOEC : Lemna gibba (duckweed) 0.0025 mg/l

48 h EC50 : Daphnia magna (Water flea) > 1,000 mg/l US EPA Test Guideline OPP 72-2

90 d : NOEC Oncorhynchus mykiss (rainbow trout) 24 mg/l OECD Test Guideline 210

21 d : NOEC Daphnia magna (Water flea) 43 mg/l OECD Test Guideline 202

Metsulfuron methyl

96 h LC50 : Oncorhynchus mykiss (rainbow trout) > 150 mg/l

72 h EC50 : Anabaena flos-aquae (cyanobacteria) 0.066 mg/l

14 d EC50 : Lemna minor (common duckweed) 0.00036 mg/l

48 h EC50 : Daphnia magna (Water flea) > 120 mg/l

Environmental Fate
Nicosulfuron

Bioaccumulation : Bioaccumulation is unlikely.

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 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.

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Waste disposal methods - : Container Refilling and Disposal:
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 |
| IMDG | Labelling No. | : 9 |
| | UN number | : 3077 |
| | Proper shipping name | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nicosulfuron) |
| | Class | : 9 |
| | Packing group | : III |
| | Labelling No. | : 9 |
| | Marine pollutant | : yes (Nicosulfuron) |

Not regulated as a hazardous material by DOT.

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!

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Causes eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes and clothing. Avoid breathing dust or spray mist.

SARA 311/312 Hazard classification : No SARA Hazards

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, Sodium sulphate, Phosphate Salt

CERCLA Reportable Quantity : Based on the percentage composition of this chemical in the product.:

| | |
|--|--------------------------|
| | Trisodium orthophosphate |
| | Naphthalene |

SARA Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

EPA Reg. No. : 352-819
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.

California Prop. 65 : This product can expose you to substances including Quartz, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16. OTHER INFORMATION

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

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.