

**DuPont™ Breakfree® NXT Herbicide**

Version 3.0

Issue Date : 03/18/2019 Ref. 130000130000
Revision Date : 02/13/2019

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™ Breakfree® NXT Herbicide
Tradename/Synonym : ACETOCHLOR: 2-chloro-2'-methyl-6'-ethyl-N-ethoxymethylacetanilide
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**Product hazard category**

Acute toxicity (Oral)	Category 4
Acute toxicity (Inhalation)	Category 4
Skin irritation	Category 2
Skin sensitisation	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity - single exposure	Category 3
Aspiration hazard	Category 1

DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019
Revision Date : 02/13/2019

Ref. 130000130000

Label content

Pictogram :



Signal word : Danger

Hazardous warnings : Harmful if swallowed or if inhaled.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.
Suspected of causing cancer.


DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019 Ref. 130000130000
 Revision Date : 02/13/2019

Hazardous prevention measures : Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 Wash skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing should not be allowed out of the workplace.
 Wear protective gloves.
 Use personal protective equipment as required.
 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 IF ON SKIN: Wash with plenty of soap and water.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 IF exposed or concerned: Get medical advice/ attention.
 Rinse mouth.
 Do NOT induce vomiting.
 If skin irritation or rash occurs: Get medical advice/ attention.
 Take off contaminated clothing and wash before reuse.
 Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.
 Dispose of contents/ container to an approved waste disposal plant.

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

Component	CAS-No.	Concentration
Acetochlor	34256-82-1	75.9 %
Furilazole	121776-33-8	2.5 %
Aromatic hydrocarbons	63231-51-6	9.2 %
Naphthalene	91-20-3	1.5 %


DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019
 Revision Date : 02/13/2019

Ref. 130000130000

Other Ingredients		10.9 %
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SECTION 4. FIRST AID MEASURES

- General advice** : 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.
 For medical emergencies involving this product, call toll free 1-800-441-3637. See Label for Additional Precautions and Directions for Use.
 Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
- Inhalation** : Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
- 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.
- Notes to physician** : No applicable data available.

SECTION 5. FIREFIGHTING MEASURES



DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019 Ref. 130000130000
 Revision Date : 02/13/2019

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- 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) : Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Wear suitable protective equipment.
- Environmental precautions : Prevent material from entering sewers, waterways, or low areas.
- Spill Cleanup : Soak up with sawdust, sand, oil dry or other absorbent material. Dispose of in an approved container.
 If liquid has been spilt in large quantities clean up promptly by scoop or vacuum.
- Accidental Release Measures : Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE

- Handling (Personnel) : Do not breathe vapor or mist. 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


DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019 Ref. 130000130000
 Revision Date : 02/13/2019

clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into 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. Keep tightly closed in a dry and cool 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 : 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. Ensure adequate ventilation. Refer to the product label for additional Engineering Controls.

Personal protective equipment

Hand protection : Material: Chemical-resistant gloves

Eye protection : Wear chemical safety goggles or equivalent eye protection.

Skin and body protection : Applicators and other handlers must wear:
 Coveralls worn over short-sleeved shirt and short pants
 Chemical resistant gloves made of any waterproof material, such as polyethylene or polyvinyl chloride.
 Chemical resistant footwear plus socks
 Protective eyewear
 Chemical resistant headgear for overhead exposure
 Chemical resistant apron when mixing, loading, or cleaning equipment or spills.
 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 worn over short-sleeved shirt and short pants



DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019 Ref. 130000130000
 Revision Date : 02/13/2019

Chemical resistant gloves made of any waterproof material
 Chemical resistant footwear plus socks
 Protective eyewear
 Chemical resistant headgear for overhead exposure

Protective measures : Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. 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. Use this product in accordance with its label.

Exposure Guidelines
 Exposure Limit Values

Naphthalene			
TLV	(ACGIH)	10 ppm	TWA
REL	(NIOSH)	10 ppm 50 mg/m3	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
REL	(NIOSH)	15 ppm 75 mg/m3	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
PEL (Permissible Exposure Limit)	(OSHA)	10 ppm 50 mg/m3	8 hr. TWA
PEL (Permissible Exposure Limit)	(OSHA)	10 ppm 50 mg/m3	TWA
PEL (Permissible Exposure Limit)	(OSHA)	15 ppm 75 mg/m3	STEL
AEL *	(DuPont)	0.1 ppm	8 & 12 hr. TWA

2-Chloro-N-(ethoxymethyl)-N-(2-ethyl-6-methylphenyl)acetamide
No applicable data available.

Biological Exposure Indices

Naphthalene			
BEI	(ACGIH)		1-Naphthol + 2-Naphthol/ End of shift (As soon as possible after exposure ceases)

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are

**DuPont™ Breakfree® NXT Herbicide**

Version 3.0

Issue Date : 03/18/2019 Ref. 130000130000
Revision Date : 02/13/2019

lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Physical state : liquid
Form : liquid
Color : blue

Odor : mild

Odor threshold : No applicable data available.

pH : Not applicable

Melting point/range : No applicable data available.

Boiling point/boiling range : No applicable data available.

Flash point : 125 °C
closed cup

Evaporation rate : No applicable data available.

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

Upper explosion limit : Not available for this mixture.

Lower explosion limit : Not available for this mixture.

Vapour Pressure : No applicable data available.

Vapor density : no data available

Density : 1.1071 g/cm³ at 20 °C (68 °F)

Specific gravity (Relative density) : 1.1071
(Water=1.0)

Water solubility : emulsifiable

Solubility(ies) : No applicable data available.

Partition coefficient: n- : No applicable data available.

**DuPont™ Breakfree® NXT Herbicide**

Version 3.0

Issue Date : 03/18/2019 Ref. 130000130000
Revision Date : 02/13/2019

octanol/water

Auto-ignition temperature : No applicable data available.

Decomposition temperature : Not available for this mixture.

Viscosity, kinematic : No applicable data available.

Viscosity, dynamic : No applicable data available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Polymerization will not occur.

Conditions to avoid : Elevated temperature

Incompatible materials : Avoid contact with: Metals, Mild steel

Hazardous decomposition products : Decomposition products may vary in nature depending upon actual conditions, eg. availability of oxygen, temperature and presence of other materials.

SECTION 11. TOXICOLOGICAL INFORMATION

DuPont™ Breakfree® NXT Herbicide

Inhalation 4 h : 1.4 mg/l , Rat
Information given is based on data obtained from similar substances.Dermal LD50 : > 5,000 mg/kg , Rat
Information given is based on data obtained from similar substances.Oral LD50 : 1,849 mg/kg , Rat
Information given is based on data obtained from similar substances.

Skin irritation : Irritating to skin., animals (unspecified species)

Eye irritation : No eye irritation, animals (unspecified species)
Minimal effects that do not meet the threshold for classification.


DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019
 Revision Date : 02/13/2019

Ref. 130000130000

Sensitisation : May cause sensitisation by skin contact., Guinea pig
 Information given is based on data obtained from similar substances.

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.

Naphthalene
 Inhalation : Rat
 An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.
 altered hematology
 eye effects

Acetochlor

Repeated dose toxicity : Ingestion
 multiple species
 - 90 dMethod: OECD Test Guideline 408
 altered hematology, altered blood chemistry, Kidney effects, Liver effects

Skin contact
 Rabbit
 - 21 d
 NOAEL: 400 mg/kg
 No toxicologically significant effects were found.

Carcinogenicity : Suspected human carcinogens
 An increased incidence of tumours was observed in laboratory animals.
 Target(s):
 Lungs
 Uterus

Mutagenicity : Weight of evidence does not support classification as a germ cell mutagen.
 Genetic damage in cultured bacterial cells was observed in some laboratory tests but not in others.
 Genetic damage in cultured mammalian cells was observed in some laboratory tests but not in others.


DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019
 Revision Date : 02/13/2019

Ref. 130000130000

Reproductive toxicity : Some evidence of adverse effects on sexual function and fertility, based on animal experiments.
 Animal testing showed effects on reproduction that included
 Reduced fertility
 Pathologic effects on reproductive organs

Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Naphthalene

Repeated dose toxicity : Inhalation
 multiple species
 - 90 d
 vapour
 No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for classification., eye effects, Liver effects, Kidney effects, Respiratory effects, Red blood cell destruction causing abnormal decrease in number of red blood cells (anaemia), nasal damage

Oral

Rat

- 90 d Method: OECD Test Guideline 408

No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for classification., Central nervous system effects, altered hematology, Kidney effects, Thymus effects

Dermal

Rat

- 90 d Method: OECD Test Guideline 411

No toxicologically significant effects were found.

Carcinogenicity : Limited evidence of carcinogenicity in inhalation studies with animals. Animal experiments showed a statistically significant number of tumours.

Target(s):

Lungs

Nose

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 one laboratory test but was not observed in others.


DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019 Ref. 130000130000
 Revision Date : 02/13/2019

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
Naphthalene	2B		

SECTION 12. ECOLOGICAL INFORMATION
Aquatic Toxicity
Acetochlor

96 h LC50	: Oncorhynchus mykiss (rainbow trout) 0.36 mg/l OECD Test Guideline 203
72 h ErC50	: Pseudokirchneriella subcapitata (green algae) 0.00052 mg/l OECD Test Guideline 201
72 h NOEC	: Pseudokirchneriella subcapitata (green algae) 0.00013 mg/l
48 h EC50	: Daphnia magna (Water flea) 8.6 mg/l OECD Test Guideline 202
60 d	: NOEC Oncorhynchus mykiss (rainbow trout) 0.13 mg/l US EPA Test Guideline OPP 72-4
21 d	: NOEC Daphnia magna (Water flea) 0.022 mg/l OECD Test Guideline 202

Furilazole

96 h LC50	: Oncorhynchus mykiss (rainbow trout) 6.2 mg/l
96 h LC50	: Lepomis macrochirus (Bluegill sunfish) 4.6 mg/l
48 h EC50	: Daphnia magna (Water flea) 26 mg/l

Naphthalene

96 h LC50	: Fish (unspecified species) 0.96 mg/l
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DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019 Ref. 130000130000
 Revision Date : 02/13/2019

8 d NOEC : Lemna gibba (duckweed) > 16 mg/l ASTM E 1415-91
 48 h EC50 : Daphnia magna (Water flea) 2.16 mg/l OECD Test Guideline 202
 40 d : NOEC Fish (unspecified species) 0.12 mg/l
 28 d : NOEC Daphnia magna (Water flea) 3 mg/l

Toxicity to other organisms

Acetochlor

LD50 : Colinus virginianus (Bobwhite quail) 928 mg/kg
 LC50 : Colinus virginianus (Bobwhite quail) > 5,620 mg/kg
 LC50 : Anas platyrhynchos (Mallard duck) > 5,620 mg/kg

Furilazole

LD50 : Colinus virginianus (Bobwhite quail) > 2,000 mg/kg
 LC50 : Colinus virginianus (Bobwhite quail) > 5,620 ppm
 LC50 : Anas platyrhynchos (Mallard duck) > 5,620 ppm

Environmental Fate

Acetochlor

Bioaccumulation : Bioaccumulation is unlikely.

Furilazole

Biodegradability : Not biodegradable
 Not readily biodegradable.

Naphthalene

Bioaccumulation : OECD Test Guideline 305
 Bioaccumulation is unlikely.

Additional ecological information : Environmental Hazards: This product is toxic to fish. 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. See product label for additional application instructions relating to environmental precautions.


DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019 Ref. 130000130000
 Revision Date : 02/13/2019

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods - Product : Do not contaminate water, food or feed by disposal. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Waste disposal methods - Container : Refer to the product label for instructions.

Contaminated packaging : No applicable data available.

SECTION 14. TRANSPORT INFORMATION

IATA_C	UN number	: 3082
	Proper shipping name	: Environmentally hazardous substance, liquid, n.o.s. (Acetochlor)
	Class	: 9
	Packing group	: III
IMDG	Labelling No.	: 9
	UN number	: 3082
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acetochlor)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9
	Marine pollutant	: yes (Acetochlor)

Not regulated by DOT unless a single package contains 100 or more pounds Naphthalene.

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



DuPont™ Breakfree® NXT Herbicide

Version 3.0

Issue Date : 03/18/2019 Ref. 130000130000
 Revision Date : 02/13/2019

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!

May cause eye and skin irritation. This product is toxic to fish. Harmful if swallowed. Harmful if inhaled. Avoid contact with skin, eyes and clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling.

SARA 311/312 Hazard classification : Acute toxicity (any route of exposure)
 Skin corrosion or irritation
 Respiratory or skin sensitisation
 Carcinogenicity
 Aspiration hazard
 Specific target organ toxicity (single or repeated exposure)

SARA 313 Regulated Chemical(s) : The following components are subject to reporting levels established by SARA Title III, Section 313: Naphthalene

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): Naphthalene

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

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

EPA Reg. No. : 62719-672-352
 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 Furilazole, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

**DuPont™ Breakfree® NXT Herbicide**

Version 3.0

Issue Date : 03/18/2019
Revision Date : 02/13/2019

Ref. 130000130000

SECTION 16. OTHER INFORMATION

	NFPA
Health :	2
Flammability :	1
Reactivity/Physical hazard :	1

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Issue Date : 03/18/2019
Revision Date : 02/13/2019

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.