

Safety Data Sheet

OVERDRIVE HERBICIDE

Revision date : 2013/07/09

Version: 4.0

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(30214506/SDS_CPA_US/EN)

1. Product and Company Identification

Company

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Substance number:	000000057156
Molecular formula:	C ₈ H ₅ Cl ₂ O ₃ .Na ; C ₅ H ₁₁ F ₂ N ₄ O ₃ .Na
Chemical family:	substituted, aromatic, carboxylic acid, semicarbazones
Synonyms:	sodium dicamba; sodium diflufenzopyr

2. Hazards Identification

Emergency overview

CAUTION:
KEEP OUT OF REACH OF CHILDREN.
KEEP OUT OF REACH OF DOMESTIC ANIMALS.
HARMFUL IF SWALLOWED.
May cause moderate but temporary irritation to the eyes.
Avoid contact with the skin, eyes and clothing.

See Product Label for additional precautionary statements.

State of matter: solid
Colour: off-white to tan
Odour: almost odourless, moderate odour

Potential health effects**Primary routes of exposure:**

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute toxicity:

Slightly toxic after single ingestion. Relatively nontoxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

Irritation / corrosion:

May cause slight irritation to the skin. May cause moderate but temporary irritation to the eyes.

Sensitization:

There is no evidence of a skin-sensitizing potential.

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Potential environmental effects

Aquatic toxicity:

There is a high probability that the product is not acutely harmful to fish. Acutely harmful for aquatic invertebrates. Acutely toxic for aquatic plants.

Terrestrial toxicity:

Acutely harmful to terrestrial organisms.

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
109293-98-3	21.4 %	Sodium Diflufenzopyr
1918-00-9	55.0 %	dicamba
	23.6 %	Inert ingredients

4. First-Aid Measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary.

If on skin:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Note to physician

Antidote:	No known specific antidote.
Treatment:	Treat symptomatically.

5. Fire-Fighting Measures

Flash point:	not applicable
Lower explosion limit:	For solids not relevant for classification and labelling.
Upper explosion limit:	For solids not relevant for classification and labelling.
Self-ignition temperature:	not determined

Suitable extinguishing media:

water spray, foam, dry powder

Unsuitable extinguishing media for safety reasons:

carbon dioxide

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Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrogen oxides, halogenated compounds
The substances/groups of substances mentioned can be released in case of fire.

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

6. Accidental release measures

Personal precautions:

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Cleanup:

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Handling

General advice:

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Storage

General advice:

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

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Storage incompatibility:

General advice: Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

8. Exposure Controls and Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	granules	
Odour:	almost odourless, moderate odour	
Colour:	off-white to tan	
pH value:	approx. 7 - 9	(1 %(m), 25 °C)
Melting point:	> 320 °C	The data given are those of the active ingredient.
Boiling point:	approx. 155 °C	(760 mmHg)
Bulk density:	610 kg/m ³	(25 °C)
Vapour density:		not determined
Solubility in water:		dispersible

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10. Stability and Reactivity

Dust explosivity characteristics:

Kst: 159 m.bar/s

Pmax=7.1

Dust explosion class:

Dust explosion class 1 (Kst-value >0 up to 200 bar m s-1) (St 1)

Conditions to avoid:

Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme temperatures. Avoid prolonged exposure to extreme heat. Avoid contamination. Avoid electro-static discharge. Avoid prolonged storage. This product may form an explosive mixture if: 1. the dust is suspended in the atmosphere as a dust cloud AND 2. the concentration of the dust is above the lower explosion limit (LEL) AND 3. the limiting oxygen concentration (LOC) is exceeded.

Substances to avoid:

strong oxidizing agents

Hazardous reactions:

The product is chemically stable.

Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.

Thermal decomposition:

Possible thermal decomposition products:

carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, hydrogen fluoride, Hydrogen chloride, halogenated hydrocarbons, Hydrocarbons

Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released.

Oxidizing properties:

not fire-propagating

11. Toxicological information

Acute toxicity

Oral:

Type of value: LD50

Species: rat (male)

Value: 1,600 mg/kg

Inhalation:

Type of value: LC50

Species: rat

Value: > 5.34 mg/l

Exposure time: 4 h

Dermal:

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg

Irritation / corrosion

Skin:

Species: rabbit

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Result: non-irritant

Eye:

Species: rabbit

Result: moderately irritating

Sensitization:

Skin sensitization test

Species: guinea pig

Result: Skin sensitizing effects were not observed in animal studies.

Genetic toxicity

Information on: Dicamba

Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic.

Information on: 3-Pyridinecarboxylic acid, 2-[1-[[[(3,5-difluorophenyl) amino]carbonyl]hydrazono]ethyl]-
No mutagenic effect was found in various tests with microorganisms and mammals.

Carcinogenicity

Information on: Dicamba

In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Information on: 3-Pyridinecarboxylic acid, 2-[1-[[[(3,5-difluorophenyl) amino]carbonyl]hydrazono]ethyl]-
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Information on: Dicamba

The results of animal studies gave no indication of a fertility impairing effect.

Information on: 3-Pyridinecarboxylic acid, 2-[1-[[[(3,5-difluorophenyl) amino]carbonyl]hydrazono]ethyl]-
The results of animal studies gave no indication of a fertility impairing effect.

Development:

Information on: Dicamba

Causes developmental effects in animals at high, maternally toxic doses.

Information on: 3-Pyridinecarboxylic acid, 2-[1-[[[(3,5-difluorophenyl) amino]carbonyl]hydrazono]ethyl]-
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

12. Ecological Information

Fish

Acute:

Oncorhynchus mykiss/LC50 (96 h): > 200 mg/l

Non-Mammals

Information on: Dicamba

Other terrestrial non-mammals:

bobwhite quail/LD50: 216 mg/kg

mallard duck/LD50: 1,373 mg/kg

bobwhite quail/LC50: > 10,000 ppm

mallard duck/LC50: > 10,000 ppm

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Honey bee/LD50: 100 ug/bee

Information on: 3-Pyridinecarboxylic acid, 2-[1-[[[(3,5-difluorophenyl) amino]carbonyl]hydrazono]ethyl]-

Other terrestrial non-mammals:

bobwhite quail/LD50: > 2,250 mg/kg

With high probability not acutely harmful to terrestrial organisms.

bobwhite quail/LC50: > 5,620 ppm

With high probability not acutely harmful to terrestrial organisms.

mallard duck/LC50: > 5,620 ppm

With high probability not acutely harmful to terrestrial organisms.

Honey bee/LD50: > 25 ug/bee

Acutely harmful to honeybees.

Degradability / Persistence

Biological / Abiological Degradation

Evaluation:

Not readily biodegradable (by OECD criteria).

Bioaccumulation

Information on: dicamba

Environmental mobility:

Information on: dicamba

Assessment transport between environmental compartments:

The substance will not evaporate into the atmosphere from the water surface.

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Information on: 3-Pyridinecarboxylic acid, 2-[1-[[[(3,5-difluorophenyl) amino]carbonyl]hydrazono]ethyl]-

Assessment transport between environmental compartments:

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Other adverse effects:

Do not discharge product into the environment without control.

The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:

Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA:

This product is not regulated by RCRA.

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14. Transport Information

Land transport USDOT

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transport IATA/ICAO

Not classified as a dangerous good under transport regulations

Further information

DOT: This product is regulated if the amount in a single receptacle exceeds the Reportable Quantity (RQ).
Please refer to Section 15 of this MSDS for the RQ for this product.

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection TSCA, US released / exempt

Chemical TSCA, US blocked / not listed

OSHA hazard category: Chronic target organ effects reported;

EPCRA 311/312 (Hazard categories): Acute; Chronic

CERCLA RQ
1000 LBS

CAS Number
1918-00-9

Chemical name
dicamba

State regulations

State RTK
MA, NJ, PA

CAS Number
1918-00-9

Chemical name
dicamba

CA Prop. 65:

Risk assessment indicates No Significant Risk Levels for Carcinogens and No Maximum Allowable Dose Levels for Chemicals Causing Reproductive Toxicity are expected when using this product as labeled for agricultural or residential use.

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16. Other Information

Refer to product label for EPA registration number.

Recommended use: herbicide

HMIS III rating

Health: 3 $\frac{3}{4}$ Flammability: 1 Physical hazard: 0

NFPA and HMIS use a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates extreme danger. Although similar, the two rating systems are intended for different purposes, and use different criteria. The NFPA system was developed to provide an on-the-spot alert to the hazards of a material, and their severity, to emergency responders. The HMIS system was designed to communicate workplace hazard information to employees who handle hazardous chemicals.

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

SDS Prepared by:

BASF NA Product Regulations

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SDS Prepared on: 2013/07/09

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