

Safety Data Sheet

VERDICT

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Version: 4.1

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(30516487/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: 000000269978
Molecular formula: C17 H17 Cl F4 N4 O5 S + C12 H18 Cl N O2 S
Chemical family: halogenated, amide, herbicide, mixture
Synonyms: saflufenacil + dimethenamid -P

2. Hazards Identification

Emergency overview

WARNING:
Causes substantial but temporary eye injury.
HARMFUL IF SWALLOWED.
HARMFUL IF INHALED.
HARMFUL IF ABSORBED THROUGH SKIN.
KEEP OUT OF REACH OF CHILDREN.
KEEP OUT OF REACH OF DOMESTIC ANIMALS.
Do not get in eyes, on skin, or on clothing.
Avoid inhalation of mists/vapours.

See Product Label for additional precautionary statements.

State of matter: liquid
Colour: light brown, clear
Odour: strong

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:

Causes substantial but temporary eye injury. May cause slight irritation to the skin.

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Medical conditions aggravated by overexposure:

Individuals with pre-existing diseases of the respiratory system, skin or eyes may have increased susceptibility to excessive exposures.

Signs and symptoms of overexposure:

Vomiting may cause aspiration pneumonia due to the ingredients. Because of the increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent, vomiting should be induced only under professional supervision.

Potential environmental effects

Aquatic toxicity:

Very toxic (acute effect) to aquatic organisms. The product has not been tested. The statement has been derived from the properties of the individual components.

Terrestrial toxicity:

With high probability not acutely harmful to terrestrial organisms.

3. Composition / Information on Ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
163515-14-8	< 56.0 %	(S)-dimethenamid
372137-35-4	< 6.5 %	Saflufenacil
	> 34.5 - < 39.0 %	Proprietary ingredients
91-57-6	< 1.5 %	Naphthalene, 2-methyl-
91-20-3	< 1.0 %	naphthalene
90-12-0	< 0.5 %	Naphthalene, 1-methyl-

4. First-Aid Measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. 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. If not breathing, give artificial respiration.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

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:

Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting unless told to by a poison control center or doctor. Do not give solids or liquids.

Note to physician

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

5. Fire-Fighting Measures

Flash point: > 112.8 °C
Autoignition: approx. 491 °C Information applies to the solvent.

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Lower explosion limit:		not determined
Upper explosion limit:		not determined
Flammability:	not determined	
Self-ignition temperature:		not self-igniting
	491 °C	

Suitable extinguishing media:

foam, dry powder, carbon dioxide, water spray

Hazards during fire-fighting:

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

If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released in case of fire.

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

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.

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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.

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.

Components with workplace control parameters

naphthalene	OSHA ACGIH	PEL 10 ppm 50 mg/m ³ ; TWA value 10 ppm ; STEL value 15 ppm ; Skin Designation ; The substance can be absorbed through the skin.
Naphthalene, 1-methyl-	ACGIH	TWA value 0.5 ppm ; Skin Designation ; The substance can be absorbed through the skin.
Naphthalene, 2-methyl-	ACGIH	TWA value 0.5 ppm ; Skin Designation ; The substance can be absorbed through the skin.

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) organic vapour/particulate respirator. 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., butyl rubber (butyl) – 16 mm coating thickness, laminated plastic (Silver Shield), nitrile rubber (Buna N), Do not use neoprene gloves., Dispose of contaminated gloves after eight hours of use.

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

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hygiene and safety practice. The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. 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:	liquid	
Odour:	strong	
Colour:	light brown, clear	
pH value:	4.2	(10 g/l, 25 °C)
Freezing point:	approx. -20 °C	(1,013.3 hPa) Information applies to the solvent.
Boiling range:	approx. 232 - 278 °C	Information applies to the solvent.
Vapour pressure:	approx. 0.05 hPa	(20 °C) Information applies to the solvent.
Density:	1.092 g/cm ³	(20 °C)
Vapour density:		not determined
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Viscosity, dynamic:	54.91 mPa.s	(20 °C)
	19.56 mPa.s	(40 °C)
Viscosity, kinematic:	49.45 mm ² /s	(20 °C)
	17.39 mm ² /s	(40 °C)
Solubility in water:		emulsifiable, insoluble

10. Stability and Reactivity

Conditions to avoid:

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

Substances to avoid:

Nitric Acid, Sulfuric acid, 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:

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:

not determined

Corrosion to metals:

The product is not to be labelled as corrosive for transport purposes.

Oxidizing properties:

Not an oxidizer.

11. Toxicological information

Acute toxicity

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Oral:

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg (OECD Guideline 423)

Inhalation:

Type of value: LC50

Species: rat (male/female)

Value: > 5.77 mg/l (OECD Guideline 403)

An aerosol was tested.

Dermal:

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg (OECD Guideline 402)

Irritation / corrosion

Skin:

Species: rabbit

Result: Slightly irritating.

May cause moderate irritation to the skin.

Eye:

Species: rabbit

Result: Moderately to severely irritating.

Causes substantial but temporary eye injury.

Sensitization:

modified Buehler test

Species: guinea pig

Caused skin sensitization in animal studies.

Genetic toxicity

Information on: dimethenamid-P

Results from a number of mutagenicity studies with microorganisms and mammalian cell culture are available.

Taking into account all of the information, there is no indication that the substance is mutagenic.

Information on: Saflufenacil

Results from a number of genotoxicity 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 genotoxic.

Carcinogenicity

Information on: dimethenamid-P

The induction of tumors in animal studies was due to a reversible, nongenotoxic effect for which a threshold dose can be derived. Indication of possible carcinogenic effect in animal tests.

Information on: Saflufenacil

Not carcinogenic.

Reproductive toxicity

Information on: dimethenamid-P

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

Information on: Saflufenacil

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

Development:

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Information on: dimethenamid-P
Causes developmental effects in animals at high, maternally toxic doses.
Information on: Saflufenacil
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Other Information:

Misuse can be harmful to health.

12. Ecological Information

Fish

Information on: dimethenamid-P
Acute:
Cyprinodon variegatus/LC50: 12 mg/l
Lepomis macrochirus/LC50: 10.0 mg/l

Information on: Saflufenacil
Acute:
OECD Guideline 203 static
Oncorhynchus mykiss/LC50 (96 h): > 120 mg/l
OECD Guideline 203 static
Lepomis macrochirus/LC50 (96 h): > 120 mg/l
OECD Guideline 203 static
Lepomis macrochirus/NOEC (96 h): >= 120 mg/l

Aquatic invertebrates

Information on: Saflufenacil
Acute:
OECD Guideline 202, part 1 static
Daphnia magna/EC50 (48 h): > 100 mg/l

Aquatic plants

Information on: dimethenamid-P
Toxicity to aquatic plants:
Algae/EC50: 0.38 mg/l
Algae/EC50: 34 mg/l

Information on: Saflufenacil
Toxicity to aquatic plants:
OECD Guideline 201 static
green algae/EC50 (72 h): 0.108 mg/l

Non-Mammals

Information on: dimethenamid-P
Other terrestrial non-mammals:
bobwhite quail/LD50: 1,068 mg/kg
bobwhite quail/LC50: > 5,620 mg/kg
mallard duck/LC50: > 5,620 mg/kg
Honey bee/LD50 (24 d): > 1000 ug/bee

Other adverse effects:

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

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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.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Marine pollutant:	YES
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains DIMETHENAMID-P, SOLVENT NAPHTHA)

Air transport

IATA/ICAO

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains DIMETHENAMID-P, SOLVENT NAPHTHA)

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:

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Crop Protection TSCA, US released / exempt

Chemical TSCA, US blocked / not listed

OSHA hazard category: IARC 1, 2A or 2B carcinogen; NTP listed carcinogen; Chronic target organ effects reported

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

EPCRA 313:

<u>CAS Number</u>	<u>Chemical name</u>
91-20-3	naphthalene

<u>CERCLA RQ</u>	<u>CAS Number</u>	<u>Chemical name</u>
100 LBS	91-20-3	naphthalene

State regulations

<u>State RTK</u>	<u>CAS Number</u>	<u>Chemical name</u>
NJ, PA	91-57-6	Naphthalene, 2-methyl-
MA, NJ, PA	91-20-3	naphthalene
MA, PA	90-12-0	Naphthalene, 1-methyl-

CA Prop. 65:

CA PROP 65: An assessment has determined that there is no significant risk present., PROP 65 warning(s) are not required for this product.

16. Other Information

Refer to product label for EPA registration number.

Recommended use: herbicide

NFPA Hazard codes:

Health : 2 Fire: 1 Reactivity: 1 Special:

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.

MSDS Prepared by:

BASF NA Product Regulations

msds@basf.com

MSDS Prepared on: 2012/03/05

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