

Safety Data Sheet

TOWER HERBICIDE

Revision date : 2013/10/29
Version: 3.0

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(30406695/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: 000000472794
Molecular formula: C12 H18 Cl N O2 S
Chemical family: carboxylic acid amide, halogenated
Synonyms: dimethenamid-P

2. Hazards Identification

Emergency overview

WARNING:
Causes substantial but temporary eye injury.
Harmful if inhaled.
Harmful if swallowed.
Harmful if absorbed through skin.
Prolonged contact may cause allergic skin reactions.
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: dark brown
Odour: strong, aromatic

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. Slightly toxic 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.

Sensitization:

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Caused skin sensitization in animal studies.

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:

aspiration pneumonia
Contains petroleum distillates.

Potential environmental effects

Aquatic toxicity:

Acutely toxic for fish. Acutely harmful for aquatic invertebrates. Very toxic (acute effect) to aquatic plants.

Terrestrial toxicity:

With high probability not acutely harmful to honeybees. 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	<= 64.0 %	S-dimethenamid
91-20-3	<= 3.0 %	naphthalene
	<= 34.0 %	Proprietary ingredients
64742-94-5	<= 20.0 %	solvent naphtha

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:

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:

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

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote. Aspiration of this product during induced emesis can result in lung injury. If evacuation of stomach contents is considered necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation.

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5. Fire-Fighting Measures

Flash point:	approx. 105 °C	(Directive 92/69/EEC, A.9)
Autoignition:	approx. 425 °C	(Directive 92/69/EEC, A.15)
Lower explosion limit:		As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:		As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Flammability:	not highly flammable	(Directive 92/69/EEC, A.12)

Suitable extinguishing media:
foam, dry powder, carbon dioxide, water spray

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, Hydrogen chloride, halogenated hydrocarbons, Hydrocarbons, nitrogen oxides, sulfur oxides
If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released if the product is involved in a fire.

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

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

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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.

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 occupational exposure limits

naphthalene	OSHA PEL	PEL 10 ppm 50 mg/m ³ ;
	ACGIH TLV	TWA value 10 ppm ; STEL value 15 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) 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.

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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:	liquid	
Odour:	strong, aromatic	
Colour:	dark brown	
pH value:	approx. 3.1	(1 %(m), 25 °C)
cloud point:	approx. -1.2 °C	
Boiling point:	approx. 204 °C	(1,013 hPa) Information applies to the solvent.
Vapour pressure:	< 1 mmHg	(25 °C)
Density:	approx. 1.13 g/cm ³ approx. 9.4303 Lb/USg	(approx. 20 °C) (OECD Guideline 109) (68 °F)
Relative density:	approx. 1.130	(approx. 20 °C) (OECD Guideline 109)
Vapour density:		not determined
Viscosity, dynamic:	approx. 16.3 mPa.s	(approx. 40 °C)
Viscosity, kinematic:	approx. 14.7 mm ² /s	(40 °C)
Solubility in water:		emulsifiable
Molar mass:	275.8 g/mol	

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:

Hazardous decomposition products: nitrogen oxides, sulfur oxides, aldehydes

Thermal decomposition:

Possible thermal decomposition products:

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

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

Corrosion to metals:

Corrosive effects to metal are not anticipated.

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Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing. (Directive 2004/73/EC, A.21)

11. Toxicological information

Acute toxicity

Oral:

Type of value: LD50

Species: rat

Value: 695 mg/kg

Inhalation:

Type of value: LC50

Species: rat

Value: > 5.6 mg/l

Exposure time: 4 h

Dermal:

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg

Irritation / corrosion

Skin:

Species: rabbit

Result: Slightly irritating.

Eye:

Species: rabbit

Result: moderately irritating

Sensitization:

Skin sensitization test

Species: guinea pig

Result: 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.

Carcinogenicity

Information on: Dimethenamid-P

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

Information on: Naphthalene

Indication of possible carcinogenic effect in animal tests.

Reproductive toxicity

Information on: Dimethenamid-P

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.

12. Ecological Information

Fish

Acute:
Oncorhynchus mykiss/LC50 (96 h): 7.94 mg/l

Aquatic invertebrates

Acute:
Daphnia magna/EC50 (48 h): 17.1 mg/l

Aquatic plants

Toxicity to aquatic plants:
green algae/EC50 (72 h): 0.1327 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

Bioaccumulation

Information on: S-dimethenamid

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Environmental mobility:

Information on: S-dimethenamid
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:

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.

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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)

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)

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

OSHA hazard category:

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

EPCRA 311/312 (Hazard categories):

Chronic;

EPCRA 313:

CAS Number

91-20-3

Chemical name

naphthalene

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State regulations

State RTK

MA, NJ, PA
PA

CAS Number

91-20-3
64742-94-5

Chemical name

naphthalene
solvent naphtha

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., 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.

SDS Prepared by:

BASF NA Product Regulations
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SDS Prepared on: 2013/10/29

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