1. Identification

Product identifier used on the label

POAST® HERBICIDE

Recommended use of the chemical and restriction on use

Recommended use*: herbicide

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

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

Telephone: +1 973 245-6000

Emergency telephone number

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

Other means of identification

Substance number: 197605
EPA Registration number: 7969-58
Molecular formula: C17 H29 O3 N S
Chemical family: heterocyclic, ketone, derivative
Synonyms: sethoxydim

2. Hazards Identification


Classification of the product

<p>| | | |</p>
<table>
<thead>
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<tr>
<td>Asp. Tox.</td>
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<td>Aspiration hazard</td>
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<td>Flam. Liq.</td>
<td>4</td>
<td>Flammable liquids</td>
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<tr>
<td>Acute Tox.</td>
<td>4</td>
<td>Acute toxicity</td>
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<tr>
<td>Skin Corr./Irrit.</td>
<td>2</td>
<td>Skin corrosion/irritation</td>
</tr>
<tr>
<td>Carc.</td>
<td>2</td>
<td>Carcinogenicity</td>
</tr>
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</table>
STOT SE 3 (Vapours may cause drowsiness and dizziness.) Specific target organ toxicity — single exposure
Aquatic Acute 1 Hazardous to the aquatic environment - acute
Aquatic Chronic 1 Hazardous to the aquatic environment - chronic

**Label elements**

**Pictogram:**

- **Signal Word:** Danger

**Hazard Statement:**

- H227 Combustible liquid.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H304 May be fatal if swallowed and enters airways.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.
- H401 Toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

**Precautionary Statements (Prevention):**

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P201 Obtain special instructions before use.
- P273 Avoid release to the environment.
- P271 Use only outdoors or in a well-ventilated area.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/gas/mist/vapours.

**Precautionary Statements (Response):**

- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P391 Collect spillage.
- P331 Do NOT induce vomiting.
- P370 + P378 In case of fire: Use water spray, dry powder, foam or carbon dioxide for extinction.

**Precautionary Statements (Storage):**

- P233 Keep container tightly closed.
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

**Precautionary Statements (Disposal):**
P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

Labeling of special preparations (GHS):
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity:
- 64% dermal
- 64% Inhalation - vapour
- 64% Inhalation - mist

3. Composition / Information on Ingredients


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<tr>
<th>CAS Number</th>
<th>Weight %</th>
<th>Chemical name</th>
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<tbody>
<tr>
<td>74051-80-2</td>
<td>18.0 %</td>
<td>Sethoxydim</td>
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<tr>
<td>127087-87-0</td>
<td>3.0 - 10.0%</td>
<td>Nonylphenol ethoxylated</td>
</tr>
<tr>
<td>64742-94-5</td>
<td>50.0 - 75.0%</td>
<td>Solvent naphtha</td>
</tr>
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4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If on skin:
Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

If in eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention. Do not induce vomiting due to aspiration hazard.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Further important symptoms and effects are so far not known.
Hazards: 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.
Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

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

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
- carbon monoxide, carbon dioxide, Sulphur dioxide, nitrogen oxide, nitrogen dioxide, Hydrocarbons,
- 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.

Advice for fire-fighters

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, protective equipment and emergency procedures

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.

Methods and material for containment and cleaning up

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

Precautions for safe handling

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.

Conditions for safe storage, including any incompatibilities
Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Further information on storage conditions: 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. Protect from temperatures above: 40 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure Controls/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: liquid
Odour: aromatic
Odour threshold: Not determined since harmful by inhalation.
Colour: yellow
pH value: approx. 3 - 5 (1 % (m), 25 °C)
Freezing point: approx. -20 °C
Boiling point: approx. 178 - 209 °C
Flash point: 145 °F
Flammability: not highly flammable
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.
Autoignition: 449 - 510 °C
Vapour pressure: approx. 1 hPa (20 °C)
Density: approx. 0.93 g/cm³ (20 °C)
7.7696 Lb/USg (68 °F)
Vapour density: not applicable
Partitioning coefficient n-octanol/water (log Pow): not applicable
10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:
Corrosive effects to metal are not anticipated.

Oxidizing properties:
Not an oxidizer.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is chemically stable.
Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

Incompatible materials
oxidizing agents

Hazardous decomposition products

Decomposition products:
Prolonged thermal loading can result in products of degradation being given off.

Thermal decomposition:
Possible thermal decomposition products:
carbon monoxide, carbon dioxide, Sulphur dioxide, nitrogen dioxide, nitrogen oxide, Hydrocarbons
Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released.

11. Toxicological information

Primary routes of exposure

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

Acute Toxicity/Effects
Acute toxicity

Oral
Type of value: LD50
Species: rat (male)
Value: 5,000 mg/kg

Type of value: LD50
Species: rat (female)
Value: 4,285.8 mg/kg

Inhalation
Type of value: LC50
Species: rat
Value: > 7.6 mg/l
Exposure time: 4 h

Dermal
Type of value: LD50
Species: rat
Value: > 5,000 mg/kg

Type of value: LD50
Species: rat
Value: > 4,000 mg/kg

Assessment other acute effects
Assessment of STOT single:
Possible narcotic effects (drowsiness or dizziness).

Irritation / corrosion
Assessment of irritating effects: May cause moderate irritation to the skin. Causes substantial but temporary eye injury.

Skin
Species: rabbit
Result: Irritating.

Eye
Species: rabbit
Result: Irritating.

Sensitization
Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

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

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.
Genetic toxicity
Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity
Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: solvent naphtha
Assessment of carcinogenicity: Long-term exposure to highly irritating concentrations resulted in skin tumors in animals. A carcinogenic effect in humans can be excluded after brief skin contact. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Reproductive toxicity
Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity
Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: sethoxydim
Assessment of teratogenicity: Causes developmental effects in animals at high, maternally toxic doses.

Other Information
Misuse can be harmful to health.

Symptoms of Exposure
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Further important symptoms and effects are so far not known.

Medical conditions aggravated by overexposure
Existing dermatitis may be aggravated by exposure.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to fish. Acutely harmful for aquatic invertebrates. Very toxic (acute effect) to aquatic plants.

Toxicity to fish
LC50 (96 h) 43 - 63 mg/l, Oncorhynchus mykiss

LC50 (96 h) 19.375 mg/l, Cyprinodon variegatus

Aquatic invertebrates
EC50 (48 h) 18.5 mg/l, Daphnia magna
EC50 (96 h) 4.429 mg/l, Mysis bahia

Toxicity to fish

*Information on: sethoxydim*

*LC50 (96 h) > 145.8 mg/l, Cyprinodon variegatus*

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**Aquatic invertebrates**

*Information on: sethoxydim*

*EC50 (48 h) 73.1 mg/l, Daphnia magna*

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**Aquatic plants**

*Information on: sethoxydim*

*EC50 (14 h) > 0.281 mg/l, Lemna gibba (static)*
*No observed effect concentration (14 h) > 0.281 mg/l, Lemna gibba (static)*

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**Assessment of terrestrial toxicity**
With high probability not acutely harmful to terrestrial organisms. Acutely toxic to honeybees.

**Other terrestrial non-mammals**

*Information on: sethoxydim*

*LD50 > 10 ug/bee, Apis mellifera*
*LC50, Anas platyrhynchos*

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**Persistence and degradability**

**Elimination information**

Not readily biodegradable (by OECD criteria).

**Bioaccumulative potential**

**Assessment bioaccumulation potential**
The product has not been tested. The statement has been derived from the properties of the individual components.

**Assessment bioaccumulation potential**

*Information on: sethoxydim*

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**Mobility in soil**

**Assessment transport between environmental compartments**
The product has not been tested. The statement has been derived from the properties of the individual components.

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

Additional information

Other ecotoxicological advice:
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. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION: THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

RCRA:
This product is not regulated by RCRA.

14. Transport Information

Land transport
USDOT

Classified as combustible liquid in containers greater than 119 gallons.

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 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 SOLVENT NAPHTHA)
Further information
DOT: Combustible liquid, only regulated in receptacles exceeding 119 gallons; not shipped as dangerous goods in receptacles less than 120 gallons.

15. Regulatory Information

Federal Regulations

Registration status:
Crop Protection TSCA, US released / exempt
Chemical TSCA, US blocked / not listed

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

EPCRA 313:
<table>
<thead>
<tr>
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<td>Solvent naphtha</td>
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CERCLA RQ
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<tr>
<th>CAS Number</th>
<th>Chemical name</th>
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<tr>
<td>100 LBS</td>
<td>Solvent naphtha</td>
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State regulations

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<td>NJ</td>
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</table>

NFPA Hazard codes:
Health : 1  Fire: 2  Reactivity: 1  Special:

Labeling requirements under FIFRA

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

WARNING:
Causes substantial but temporary eye injury. HARMFUL IF SWALLOWED. KEEP OUT OF REACH OF CHILDREN. KEEP OUT OF REACH OF DOMESTIC ANIMALS. Avoid contact with the skin, eyes and clothing.

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
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.

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END OF DATA SHEET