



# Material Safety Data Sheet

Dow AgroSciences LLC

**Product Name:** TREFLAN\* HFP Herbicide

**Issue Date:** 06/16/2009

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Dow AgroSciences LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

## 1. Product and Company Identification

### Product Name

TREFLAN\* HFP Herbicide

### COMPANY IDENTIFICATION

Dow AgroSciences LLC  
A Subsidiary of The Dow Chemical Company  
9330 Zionsville Road  
Indianapolis, IN 46268-1189  
USA

Customer Information Number:

800-992-5994  
SDSQuestion@dow.com

### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:**

800-992-5994

**Local Emergency Contact:**

352-323-3500

## 2. Hazards Identification

### Emergency Overview

**Color:** Orange

**Physical State:** Liquid.

**Odor:** Solvent

### Hazards of product:

**DANGER!** May cause allergic skin reaction. May cause eye irritation. May cause skin irritation. Aspiration hazard. Can enter lungs and cause damage. Isolate area. Stay out of low areas. Suspect cancer hazard. May cause cancer.

### OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

\* Indicates a Trademark

\* Indicates a Trademark of Dow AgroSciences LLC

**Potential Health Effects**

**Eye Contact:** May cause slight eye irritation. May cause slight corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness.

**Skin Contact:** Brief contact may cause slight skin irritation with local redness. Prolonged contact may cause skin irritation with local redness. May cause drying and flaking of the skin.

**Skin Absorption:** Prolonged skin contact is unlikely to result in absorption of harmful amounts.

**Skin Sensitization:** For the active ingredient(s): Skin contact may cause an allergic skin reaction.

**Inhalation:** No adverse effects are anticipated from single exposure to mist.

**Ingestion:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

**Aspiration hazard:** Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

**Effects of Repeated Exposure:** For the active ingredient(s): In animals, effects have been reported on the following organs: Liver. Kidney. Blood. For the solvent(s): In animals, effects have been reported on the following organs: Lung. Gastrointestinal tract. Thyroid. Urinary tract. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. For the major component(s): Naphthalene. Observations in animals include: Respiratory effects. Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust. Ingestion of naphthalene by humans has caused hemolytic anemia. Excessive exposure may cause hemolysis, thereby impairing the blood's ability to transport oxygen.

**Cancer Information:** For the active ingredient(s): A low incidence of urinary tract tumors was seen in only 1 of 5 chronic studies in rats with trifluralin. Trifluralin is not anticipated to be a carcinogenic risk to man. For the major component(s): Naphthalene. Has caused cancer in some laboratory animals. In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.

**Birth Defects/Developmental Effects:** For the active ingredient(s): Trifluralin. Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

**3. Composition Information**

Component	CAS #	Amount
Trifluralin	1582-09-8	43.0 %
Naphthalene	91-20-3	7.0 %
Balance		50.0 %

**4. First-aid measures**

**Eye Contact:** Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice.

**Skin Contact:** Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

**Inhalation:** Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.

**Ingestion:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

**Notes to Physician:** Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury. The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical

condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

**Medical Conditions Aggravated by Exposure:** Skin contact may aggravate preexisting dermatitis.

## 5. Fire Fighting Measures

**Extinguishing Media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

**Special Protective Equipment for Firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

**Unusual Fire and Explosion Hazards:** Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

**Hazardous Combustion Products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Fluorinated hydrocarbons. Carbon monoxide. Carbon dioxide.

## 6. Accidental Release Measures

**Steps to be Taken if Material is Released or Spilled:** Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance.

**Personal Precautions:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Keep personnel out of low areas. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental Precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

## 7. Handling and Storage

### Handling

**General Handling:** Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not swallow. Keep out of reach of children. Avoid breathing vapor or mist. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

### Storage

Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

## 8. Exposure Controls / Personal Protection

### Exposure Limits

Component	List	Type	Value
Naphthalene	ACGIH	TWA	10 ppm SKIN
	ACGIH	STEL	15 ppm SKIN
	OSHA Table Z-1	PEL	50 mg/m3 10 ppm

A "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

### Personal Protection

**Eye/Face Protection:** Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

**Skin Protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Avoid gloves made of: Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Respiratory Protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

**Ingestion:** Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

### Engineering Controls

**Ventilation:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit

requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

## 9. Physical and Chemical Properties

<b>Physical State</b>	Liquid.
<b>Color</b>	Orange
<b>Odor</b>	Solvent
<b>Flash Point - Closed Cup</b>	99 °C (210 °F) <i>Pensky-Martens Closed Cup ASTM D 93</i>
<b>Flammable Limits In Air</b>	<b>Lower:</b> 1.8 %(V) <i>Estimated.</i> Solvent <b>Upper:</b> 11.8 %(V) <i>Estimated.</i> Solvent
<b>Autoignition Temperature</b>	No test data available
<b>Vapor Pressure</b>	< 1 hPa @ 20 °C <i>Literature</i> Solvent
<b>Boiling Point (760 mmHg)</b>	232 - 275 °C (450 - 527 °F) <i>Literature</i> Solvent.
<b>Vapor Density (air = 1)</b>	4.7 <i>Literature</i> (solvent, relative to air)
<b>Specific Gravity (H2O = 1)</b>	1.117 <i>Literature</i>
<b>Liquid Density</b>	1.117 g/cm <sup>3</sup> <i>Literature</i>
<b>Freezing Point</b>	No test data available
<b>Melting Point</b>	No test data available
<b>Solubility in water (by weight)</b>	emulsifies in water
<b>pH</b>	5.0 <i>Literature</i> (aqueous 50/50)
<b>Decomposition Temperature</b>	No test data available

## 10. Stability and Reactivity

### Stability/Instability

Unstable at elevated temperatures.

**Conditions to Avoid:** Exposure to elevated temperatures can cause product to decompose.

Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid. Avoid static discharge.

**Incompatible Materials:** Avoid contact with: Oxidizers.

### Hazardous Polymerization

Will not occur.

### Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials.

Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide.

Fluorinated hydrocarbons. Hydrogen fluoride. Nitrogen oxides. Toxic flammable gases can be released during decomposition.

## 11. Toxicological Information

### Acute Toxicity

#### Ingestion

LD50, Rat, male > 5,000 mg/kg

LD50, Rat, female 4,013 mg/kg

#### Skin Absorption

LD50, Rabbit, male and female > 2,000 mg/kg

#### Inhalation

LC50, 4 h, Aerosol, Rat, male and female > 7.74 mg/l

**Sensitization****Skin**

For the active ingredient(s): Skin contact may cause an allergic skin reaction.

**Repeated Dose Toxicity**

For the active ingredient(s): In animals, effects have been reported on the following organs: Liver. Kidney. Blood. For the solvent(s): In animals, effects have been reported on the following organs: Lung. Gastrointestinal tract. Thyroid. Urinary tract. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. For the major component(s): Naphthalene. Observations in animals include: Respiratory effects. Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust. Ingestion of naphthalene by humans has caused hemolytic anemia. Excessive exposure may cause hemolysis, thereby impairing the blood's ability to transport oxygen.

**Chronic Toxicity and Carcinogenicity**

For the active ingredient(s): A low incidence of urinary tract tumors was seen in only 1 of 5 chronic studies in rats with trifluralin. Trifluralin is not anticipated to be a carcinogenic risk to man. For the major component(s): Naphthalene. Has caused cancer in some laboratory animals. In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.

**Carcinogenicity Classifications:**

Component	List	Classification
Naphthalene	ACGIH	Not classifiable as a human carcinogen.; Group A4
	IARC	Possible carcinogen.; 2B
	NTP	Anticipated carcinogen.

**Developmental Toxicity**

For the active ingredient(s): Trifluralin. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. For the active ingredient(s): Trifluralin. For the solvent(s): For the major component(s): Did not cause birth defects in laboratory animals.

**Reproductive Toxicity**

For the active ingredient(s): Trifluralin. In animal studies, did not interfere with reproduction.

**Genetic Toxicology**

For the active ingredient(s): Trifluralin. In vitro genetic toxicity studies were predominantly negative. For the solvent(s): In vitro genetic toxicity studies were negative. For the major component(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases. For the active ingredient(s): Trifluralin. Animal genetic toxicity studies were predominantly negative. For the solvent(s): Animal genetic toxicity studies were negative.

## 12. Ecological Information

**ENVIRONMENTAL FATE**

Data for Component: **Trifluralin**

**Movement & Partitioning**

Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is slight (Koc between 2000 and 5000).

**Henry's Law Constant (H):** 1.03E-04 atm\*m3/mole; 25 °C Estimated.

**Persistence and Degradability**

Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

**Indirect Photodegradation with OH Radicals**

Rate Constant	Atmospheric Half-life	Method
2.4004E-11 cm3/s	5.347 h	Estimated.

**Stability in Water (1/2-life):**

> 1 y; pH 3 - 9; Measured

0.19 - 3.08 h; Measured

**OECD Biodegradation Tests:**

Biodegradation	Exposure Time	Method
5 %	28 d	OECD 301B Test

Data for Component: Naphthalene**Movement & Partitioning**

Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is medium (Koc between 150 and 500).

**Henry's Law Constant (H):** 2.92E-04 - 5.53E-04 atm\*m3/mole; 25 °C Measured

**Partition coefficient, n-octanol/water (log Pow):** 3.3 Measured

**Partition coefficient, soil organic carbon/water (Koc):** 240 - 1,300 Measured

**Bioconcentration Factor (BCF):** 40 - 300; fish; Measured

**Distribution in Environment: Mackay Level 1 Fugacity Model:**

Air	Water.	Biota	Soil	Sediment
74 %	8.5 %	< 0.01 %	18 %	0.39 %

**Persistence and Degradability**

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

**Indirect Photodegradation with OH Radicals**

Rate Constant	Atmospheric Half-life	Method
2.16E-11 cm3/s	5.9 h	Estimated.

**Biological oxygen demand (BOD):**

BOD 5	BOD 10	BOD 20	BOD 28
57 %	71 %	71 %	

**Theoretical Oxygen Demand:** 3.00 mg/mg

**ECOTOXICITY**Data for Component: Trifluralin

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species). Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg). Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

**Fish Acute & Prolonged Toxicity**

LC50, fathead minnow (*Pimephales promelas*), 96 h: 0.094 - 0.205 mg/l

LC50, bluegill (*Lepomis macrochirus*), 96 h: 0.0084 - 0.40 mg/l

LC50, rainbow trout (*Oncorhynchus mykiss*), 96 h: 0.025 - 0.10 mg/l

LC50, common carp (*Cyprinus carpio*), flow-through, 96 h: 0.089 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea *Daphnia magna*, static renewal, 24 h, immobilization: 0.13 - 0.56 mg/l

EC50, mussel *Mytilus edulis*, static, 48 h, immobilization: 0.096 mg/l

**Aquatic Plant Toxicity**

EC50, green alga *Pseudokirchneriella subcapitata* (formerly known as *Selenastrum capricornutum*), biomass growth inhibition, 5 d: 0.67 mg/l

EyC50, green alga *Pseudokirchneriella subcapitata* (formerly known as *Selenastrum capricornutum*), Dry weight, 72 h: 37 mg/l

**Toxicity to Micro-organisms**

EC50; activated sludge, respiration inhibition, 3 h: > 100 mg/l

**Toxicity to Non-mammalian Terrestrial Species**

dietary LC50, mallard (*Anas platyrhynchos*): > 5,000 ppm

oral LD50, bobwhite (*Colinus virginianus*): > 2,000 mg/kg

contact LD50, Honey bee (*Apis mellifera*): > 100 micrograms/bee

oral LD50, Honey bee (*Apis mellifera*): > 100 micrograms/bee

**Toxicity to Soil Dwelling Organisms**

LC50, Earthworm *Eisenia foetida*, adult, 14 d: > 1,000 mg/kg

Data for Component: Naphthalene

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

**Fish Acute & Prolonged Toxicity**

LC50, rainbow trout (*Oncorhynchus mykiss*), 96 h: 0.11 mg/l

**Aquatic Invertebrate Acute Toxicity**

EC50, water flea *Daphnia magna*, static, 48 h, immobilization: 1.6 - 24.1 mg/l

### 13. Disposal Considerations

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

### 14. Transport Information

#### DOT Non-Bulk

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S

**Technical Name:** TRIFLURALIN, NAPHTHALENE

**Hazard Class:** 9 **ID Number:** UN3082 **Packing Group:** PG III

#### DOT Bulk

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S

**Technical Name:** TRIFLURALIN, NAPHTHALENE

**Hazard Class:** 9 **ID Number:** UN 3082 **Packing Group:** PG III

#### IMDG

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S

**Technical Name:** TRIFLURALIN, NAPHTHALENE

**Hazard Class:** 9 **ID Number:** UN3082 **Packing Group:** PG III

**EMS Number:** F-C,S-U

**Marine pollutant.:** Yes

#### ICAO/IATA

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S

**Technical Name:** TRIFLURALIN, NAPHTHALENE

**Hazard Class:** 9 **ID Number:** UN3082 **Packing Group:** PG III

**Cargo Packing Instruction:** 914

**Passenger Packing Instruction:** 914

#### Additional Information

Reportable quantity: 23 lb – TRIFLURALIN, 1,429 lb – NAPHTHALENE

MARINE POLLUTANT (TRIFLURALIN)

Naphthalene

*This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.*



## 15. Regulatory Information

### OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	No
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Component	CAS #	Amount
Trifluralin	1582-09-8	43.0%
Naphthalene	91-20-3	7.0%

### Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Trifluralin	1582-09-8	43.0%
Naphthalene	91-20-3	7.0%

### Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

### Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

This product contains the following substances which are subject to CERCLA Section 103 reporting requirements and which are listed in 40 CFR 302.4.

Component	CAS #	Amount
Trifluralin	1582-09-8	43.0%
Naphthalene	91-20-3	7.0%

### California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Component	CAS #	Amount
Naphthalene	91-20-3	7.0%

### Toxic Substances Control Act (TSCA)

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

## 16. Other Information

### Hazard Rating System

<b>NFPA</b>	<b>Health</b>	<b>Fire</b>	<b>Reactivity</b>
	2	1	1

### Revision

Identification Number: 1000831 / 1016 / Issue Date 06/16/2009 / Version: 4.0

DAS Code: GF-1239

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

### Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

*Dow AgroSciences LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.*