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
GOLDSKY* 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

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 800-992-5994
Local Emergency Contact: 800-992-5994

2. Hazards Identification

Emergency Overview
Color: Tan to brown
Physical State: Liquid
Odor: Gasoline-like
Hazards of product:

WARNING! May cause allergic skin reaction. Causes eye irritation. May cause central nervous system effects. May cause anesthetic effects.

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

Potential Health Effects
Eye Contact: May cause moderate eye irritation which may be slow to heal. May cause slight corneal injury.

Skin Contact: Brief contact may cause slight 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: Has caused allergic skin reactions when tested in mice.
Inhalation: Prolonged excessive exposure to mist may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.
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. For the solvent(s): In animals, effects have been reported on the following organs: Lung. For the major component(s): In animals, effects have been reported on the following organs: 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 minor component(s) In animals, effects have been reported on the following organs: Liver. Kidney. Thymus. Thyroid. Bladder. Bone marrow. Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust.
Cancer Information: For the active ingredient(s): Has caused cancer in some laboratory animals. For the solvent(s): Contains naphthalene which 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): Fluroxypyr 1-methylheptyl ester. Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

Component	CAS #	Amount
Fluroxypyr 1-methylheptyl ester	81406-37-3	11.6 %
Cloquintocet-mexyl	99607-70-2	3.6 %
Pyroxsulam	422556-08-9	1.2 %
Florasulam	145701-23-1	0.2 %
Naphthalene	91-20-3	>= 0.6 - <= 1.0 %
Balance		>= 82.4 - <= 82.8 %

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.
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: Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the

stomach. The decision of whether to induce vomiting or not should be made by a physician. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
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. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.
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. 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. Avoid accumulation of water. Product may be carried across water surface spreading fire or contacting an ignition source. 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. Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of: Hydrogen fluoride. Hydrogen chloride.

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: 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: Keep out of reach of children. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling.

Other Precautions: Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

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
Fluroxypyr 1-methylheptyl ester	Dow IHG	TWA	10 mg/m3
Pyroxsulam	Dow IHG	TWA	5 mg/m3 D-SEN

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.
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"). Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. 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. In misty atmospheres, use an approved particulate 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 engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Tan to brown
Odor	Gasoline-like
Flash Point - Closed Cup	> 100 °C (> 212 °F) *Setaflash Closed Cup ASTMD3828*
Flammable Limits In Air	**Lower**: No test data available **Upper**: No test data available
Autoignition Temperature	No test data available
Vapor Pressure	No test data available
Boiling Point (760 mmHg)	No test data available.
Vapor Density (air = 1)	No test data available
Specific Gravity (H2O = 1)	No test data available
Liquid Density	1.05 g/cm3 @ 20 °C *Digital density meter*
Freezing Point	No test data available
Melting Point	No test data available
Solubility in Water (by weight)	water dispersible
pH	4.8 (@ 1 %) *pH Electrode*
Decomposition Temperature	No test data available

10. Stability and Reactivity

Stability/Instability
Unstable at elevated temperatures.
Conditions to Avoid: Some components of this product can decompose at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems. 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. Nitrogen oxides. Toxic gases are released during decomposition. Decomposition products can include trace amounts of: Hydrogen chloride. Hydrogen fluoride.

11. Toxicological Information

Acute Toxicity
Ingestion
LD50, Rat, female 3,129 mg/kg
Skin Absorption
LD50, Rat, male and female > 5,000 mg/kg
Inhalation
Maximum attainable concentration. LC50, 4 h, Aerosol, Rat, male and female > 2.46 mg/l
Sensitization
Skin
Has caused allergic skin reactions when tested in mice.
Repeated Dose Toxicity

For the active ingredient(s): In animals, effects have been reported on the following organs: Liver. Kidney. For the solvent(s): In animals, effects have been reported on the following organs: Lung. For the major component(s): In animals, effects have been reported on the following organs: 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 minor component(s) In animals, effects have been reported on the following organs: Liver. Kidney. Thymus. Thyroid. Bladder. Bone marrow. Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust.

Chronic Toxicity and Carcinogenicity

For the active ingredient(s): Has caused cancer in some laboratory animals. For the solvent(s): Contains naphthalene which 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	IARC	Possible carcinogen.; 2B
	NTP	Anticipated carcinogen.

Developmental Toxicity

For the active ingredient(s): Fluroxypyr 1-methylheptyl ester. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. For the active ingredient(s): For the component(s) tested: Did not cause birth defects in laboratory animals.

Reproductive Toxicity

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

Genetic Toxicology

For the majority of components: In vitro genetic toxicity studies were negative. For the component(s) tested: Animal genetic toxicity studies were negative.

12. Ecological Information

ENVIRONMENTAL FATE

Data for Component: **Fluroxypyr 1-methylheptyl ester**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is slight (Koc between 2000 and 5000).
Henry's Law Constant (H): 5.42E-8 atm*m3/mole; 25 °C Measured
Partition coefficient, n-octanol/water (log Pow): 3.79 Measured
Partition coefficient, soil organic carbon/water (Koc): 4,678 Estimated
Bioconcentration Factor (BCF): 26; rainbow trout (Oncorhynchus mykiss); Measured

Persistence and Degradability

No relevant information found.
Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
36.77E-12 cm3/s	3.49 h	Estimated

Data for Component: **Cloquintocet-mexyl**

Movement & Partitioning

Expected to be relatively immobile in soil (Koc > 5000). Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Henry's Law Constant (H): 2.98E-08 atm*m3/mole; 25 °C Measured
Partition coefficient, n-octanol/water (log Pow): 5.03 Measured
Partition coefficient, soil organic carbon/water (Koc): 38,070 Estimated
Bioconcentration Factor (BCF): 1,490; Estimated

Persistence and Degradability

No relevant information found.

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
27.54E-12 cm3/s	0.388 d	Estimated

Stability in Water (1/2-life):
25.739 h; 3.161E+00 l/m_.s; 25 °C; pH 7;Estimated

Data for Component: **Pyroxsulam**

Movement & Partitioning
No relevant information found.

Persistence and Degradability
Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
20 - 30 %	28 d	OECD 301B Test

Data for Component: **Florasulam**

Movement & Partitioning
Bioconcentration potential is low (BCF less than 100 or log Pow less than 3).
Partition coefficient, n-octanol/water (log Pow): No test data available:
Bioconcentration Factor (BCF): 0.8 - 2.2; fish; Measured

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

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
2 %	28 d	OECD 301B Test

Data for Component: **Naphthalene**

Movement & Partitioning
Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7). Potential for mobility in soil is medium (Koc between 150 and 500).
Henry's Law Constant (H): 2.92E-4 - 5.53E-4 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): 4,000 - 6,000; invertebrate; Measured
40 - 300; rainbow trout (Oncorhynchus mykiss)

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: 3.01 mg/mg

ECOTOXICITY
Data for Component: **Fluroxypyr 1-methylheptyl ester**

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in 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, bluegill (Lepomis macrochirus), static, 96 h: > 0.629 mg/l
LC50, sheepshead minnow (Cyprinodon variegatus), flow-through, 96 h: > 0.0866 mg/l
LC50, rainbow trout (Oncorhynchus mykiss), static, 96 h: 12 - 17 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia magna, flow-through, 21 d, immobilization: > 0.499 mg/l
LC50, pink shrimp (Penaeus duorarum), flow-through, 96 h, survival: > 0.128 mg/l
EC50, eastern oyster (Crassostrea virginica), flow-through, 96 h, immobilization: 0.068 mg/l
EC50, eastern oyster (Crassostrea virginica), flow-through, 96 h: > 0.079 mg/l
Aquatic Plant Toxicity
EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), biomass growth inhibition, 5 d: > 2.0 mg/l
EC50, diatom Skeletonema costatum, biomass growth inhibition, 5 d: 0.246 - 0.292 mg/l
EC50, diatom Navicula sp., biomass growth inhibition, 5 d: 0.037 mg/l
EC50, duckweed Lemna sp., Number of plants, 14 d: > 2.31 mg/l
EC50, diatom Navicula sp., Growth inhibition (cell density reduction), 120 h: 0.96 mg/l
Toxicity to Non-mammalian Terrestrial Species
oral LD50, mallard (Anas platyrhynchos): > 2,000 mg/kg
dietary LC50, mallard (Anas platyrhynchos): > 5,620 ppm
contact LD50, Honey bee (Apis mellifera): > 25 micrograms/bee
dietary LC50, Honey bee (Apis mellifera): > 100 micrograms/bee

Data for Component: **Cloquintocet-mexyl**

Material is slightly toxic to fish on an acute basis (LC50 between 10 and 100 mg/L). Material is practically non-toxic to aquatic invertebrates on an acute basis (LC50/EC50 > 100 mg/L). 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, rainbow trout (Oncorhynchus mykiss), 96 h: > 76 mg/l
LC50, channel catfish (Ictalurus punctatus), 96 h: 14 mg/l
Aquatic Invertebrate Acute Toxicity
LC50, water flea Daphnia magna, 48 h: > 100 mg/l
Aquatic Plant Toxicity
EC50, alga Scenedesmus sp., biomass growth inhibition, 96 h: 0.63 mg/l
EC50, diatom Navicula sp., biomass growth inhibition, 120 h: 1.7 mg/l
Toxicity to Non-mammalian Terrestrial Species
oral LD50, mallard (Anas platyrhynchos): > 2,000 mg/kg
dietary LC50, mallard (Anas platyrhynchos): > 5,200 ppm
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: > 1,000 mg/kg

Data for Component: **Pyroxsulam**

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). 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), static, 96 h: > 94.4 mg/l
LC50, rainbow trout (Oncorhynchus mykiss), static, 96 h: > 87.0 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia magna, static, 48 h, immobilization: > 100 mg/l
Toxicity to Micro-organisms
EC50; activated sludge, respiration inhibition, 3 h: > 1,000 mg/l
Fish Chronic Toxicity Value (ChV):

ChV Value mg/l	Species	Test Type	Endpoint	Exposure Time
> 10.1 mg/l	fathead minnow (Pimephales promelas)	flow-through	survival	40 d

Aquatic Invertebrates Chronic Toxicity Value:

ChV Value mg/l	Species	Test Type	Endpoint	Exposure Time
> 10.4 mg/l	water flea Daphnia magna	static renewal	survival	21 d

Toxicity to Non-mammalian Terrestrial Species
dietary LC50, mallard (Anas platyrhynchos): > 5,000 mg/kg
contact LD50, Honey bee (Apis mellifera): > 100 micrograms/bee
oral LD50, Honey bee (Apis mellifera): > 107.4 micrograms/bee
LD50, mallard (Anas platyrhynchos): > 2,000 mg/kg
Toxicity to Soil Dwelling Organisms
LC50, Earthworm Eisenia foetida, adult, 14 d: > 10,000 mg/kg

Data for Component: **Florasulam**

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). Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg). Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

Fish Acute & Prolonged Toxicity
LC50, bluegill (Lepomis macrochirus), 96 h: > 100 mg/l
LC50, tidewater silverside (Menidia beryllina), 96 h: > 122 mg/l
Aquatic Invertebrate Acute Toxicity
LC50, water flea Daphnia magna, 48 h: 180 - 292 mg/l
LC50, grass shrimp (Palaemonetes pugio), 96 h: > 120 mg/l
Aquatic Plant Toxicity
EC50, diatom Skeletonema costatum, biomass growth inhibition, 72 h: 31.3 mg/l
EC50, blue-green alga Anabaena flos-aquae, biomass growth inhibition, 96 h: 0.363 mg/l
Aquatic Invertebrates Chronic Toxicity Value:

ChV Value mg/l	Species	Test Type	Endpoint	Exposure Time
83.7 mg/l	water flea Daphnia magna	static renewal	number of offspring	21 d
50.2 mg/l	water flea Daphnia magna	static renewal	growth	21 d
83.7 mg/l	water flea Daphnia magna	static renewal	survival	21 d

Toxicity to Non-mammalian Terrestrial Species
oral LD50, Japanese quail (Coturnix coturnix japonica): 1,047 mg/kg
dietary LC50, mallard (Anas platyrhynchos): > 5,000 ppm
contact LD50, Honey bee (Apis mellifera): > 100 micrograms/bee
Toxicity to Soil Dwelling Organisms
LC50, Earthworm Eisenia foetida, adult, 14 d: > 1,320 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
EC50, water flea Daphnia pulex, static, 48 h, immobilization: 1.0 - 4.6 mg/l
Aquatic Plant Toxicity
EC50, diatom Skeletonema costatum, Growth rate inhibition, 72 h: 0.4 mg/l
Toxicity to Non-mammalian Terrestrial Species
dietary LC50, bobwhite (Colinus virginianus): > 5,620 ppm
Toxicity to Soil Dwelling Organisms
LC50, Earthworm Eisenia foetida, adult, 2 d: 4.67 mg/cm2

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
NOT REGULATED

DOT Bulk
NOT REGULATED

IMDG
NOT REGULATED

ICAO/IATA
NOT REGULATED

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
Naphthalene	91-20-3	>= 0.6 - <= 1.0 %

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
Naphthalene	91-20-3	>= 0.6 - <= 1.0 %

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
Naphthalene	91-20-3	>= 0.6 - <= 1.0 %

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	>= 0.6 - <= 1.0 %

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30. This product contains a substance subject to a TSCA Section 5(a)(2) Significant New Use Rule (SNUR) and export notification under TSCA 12(b).
The SNUR is described in 40 CFR 721.8850 and requires the following Hazard Communication information: This substance may cause central nervous system effects and internal organ effects. When using this substance avoid skin contact, avoid breathing substance, use respiratory protection and use skin protection. This substance may be toxic to fish and toxic to aquatic organisms. Notice to users: Disposal restrictions apply, do not release to water.

16. Other Information

Hazard Rating System

NFPA	Health	Fire	Reactivity
	2	1	1

Revision

Identification Number: 1007687 / 1016 / Issue Date 10/31/2008 / Version: 2.0
DAS Code: GF-1848
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.

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