



Material Safety Data Sheet

Dow AgroSciences LLC

Product Name: EAGLE* 20EW Fungicide

Issue Date: 05/24/2012

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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

EAGLE* 20EW Fungicide

COMPANY IDENTIFICATION

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

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: White

Physical State: Liquid.

Odor: Ester

Hazards of product:

CAUTION! May cause eye irritation. May be harmful if inhaled. May cause central nervous system effects. May cause anesthetic effects. May cause respiratory tract irritation. Isolate area. Keep upwind of spill. Toxic fumes may be released in fire situations. 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.

Potential Health Effects

Eye Contact: May cause moderate eye irritation. May cause slight corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness. In humans, eye irritation resulted from brief (minutes) exposure to cyclohexanone vapor concentration of 50 ppm and above.

Skin Contact: Brief contact may cause slight skin irritation with local redness.

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

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. Signs and symptoms of excessive exposure may include: Sweating. Nausea and/or vomiting.

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. Excessive exposure may cause neurologic signs and symptoms. Observations in animals include: Convulsions. Muscle spasms or twitches.

Aspiration hazard: Based on physical properties, not likely to be an aspiration hazard.

Effects of Repeated Exposure: For the active ingredient(s): In animals, effects have been reported on the following organs: Adrenal gland. Kidney. Liver. Testes. Thyroid. Based on information for component(s): In animals, effects have been reported on the following organs: Lung. Thyroid. Gastrointestinal tract. Kidney. Liver. Urinary tract. In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

Cancer Information: Contains naphthalene which has caused cancer in some laboratory animals. However, the relevance of this to humans is unknown.

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

Reproductive Effects: For the active ingredient(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Cyclohexanone caused reduced growth and survival of offspring in an animal reproduction study. Dose levels producing this effect also caused central nervous system effects in parental animals.

3. Composition Information

Component	CAS #	Amount
Myclobutanil	88671-89-0	20.0 %
Cyclohexanone	108-94-1	10.0 %
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	25.0 %
Propylene glycol	57-55-6	6.0 %
1,2,4-Trimethylbenzene	95-63-6	0.4 %
Naphthalene	91-20-3	0.3 %
Balance	Not available	38.3 %

4. First-aid measures

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

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.

Skin Contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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. Suitable emergency eye wash facility should be immediately available.

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.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. Probable mucosal damage may contraindicate the use of gastric lavage. 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.

Repeated excessive exposure may aggravate preexisting lung disease.

5. Fire Fighting Measures

Suitable extinguishing media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective. Water fog, applied gently may be used as a blanket for fire extinguishment.

Special hazards arising from the substance or mixture

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. Hydrogen cyanide. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. 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.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Keep upwind of spill. Ventilate area of leak or spill. 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.

Methods and materials for containment and cleaning up: 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. See Section 13, Disposal Considerations, for additional 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. Wash thoroughly after handling. Keep container closed. 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. Do not store near food, foodstuffs, drugs or potable water supplies.

To maintain product quality, recommended storage temperature is > -5 °C

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Cyclohexanone	ACGIH	TWA	20 ppm SKIN
	ACGIH	STEL	50 ppm SKIN
	OSHA Table Z-1	PEL	200 mg/m3 50 ppm
	Dow IHG	TWA	7.5 ppm SKIN
Naphthalene	ACGIH	TWA	10 ppm SKIN
	ACGIH	STEL	15 ppm SKIN
	OSHA Table Z-1	PEL	50 mg/m3 10 ppm
Propylene glycol	WEEL	TWA Aerosol.	10 mg/m3
Myclobutanil	Dow IHG	TWA	0.5 mg/m3
1,2,4-Trimethylbenzene	ACGIH	TWA	25 ppm

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.

A "skin" notation following the inhalation 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.

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.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Nitrile/butadiene rubber ("nitrile" or "NBR"). 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

Appearance

Physical State	Liquid.
Color	White
Odor	Ester
Odor Threshold	No test data available
pH	6.57 (@ 100 %) <i>CIPAC MT 75</i> (neat)
Melting Point	Not applicable
Freezing Point	No test data available
Boiling Point (760 mmHg)	No test data available.
Flash Point - Closed Cup	> 100 °C (> 212 °F) <i>CIPAC MT 12.3</i>
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammable Limits In Air	Lower: No test data available Upper: No test data available
Vapor Pressure	No test data available
Vapor Density (air = 1)	No test data available
Specific Gravity (H₂O = 1)	1.031 20 °C/4 °C <i>Digital Density Meter (Oscillating Coil)</i>
Solubility in water (by weight)	emulsifiable
Partition coefficient, n-octanol/water (log Pow)	No data available for this product. See Section 12 for individual component data.
Autoignition Temperature	No test data available
Decomposition Temperature	No test data available
Dynamic Viscosity	2,484 cPs @ 25 °C

Kinematic Viscosity	No test data available
Explosive properties	no data available
Oxidizing properties	no data available
Liquid Density	1.03 g/cm ³ @ 20 °C <i>Digital density meter</i>
Surface tension	38.2 mN/m @ 25 °C <i>EC Method A5</i>

10. Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions

Polymerization will not occur.

Conditions to Avoid: Active ingredient decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: Avoid contact with: Strong oxidizers.

Hazardous decomposition products

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. Hydrogen chloride. Hydrogen cyanide. Nitrogen oxides. Toxic gases are released during decomposition.

11. Toxicological Information

Acute Toxicity

Ingestion

As product: Single dose oral LD50 has not been determined. For similar material(s): LD50, rat, female 3,749 mg/kg

Dermal

As product: The dermal LD50 has not been determined. For similar material(s): LD50, rat, male and female > 2,000 mg/kg

No deaths occurred at this concentration.

Inhalation

As product: The LC50 has not been determined. Estimated. LC0, Aerosol, rat > 5 mg/l

Eye damage/eye irritation

May cause moderate eye irritation. May cause slight corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness. In humans, eye irritation resulted from brief (minutes) exposure to cyclohexanone vapor concentration of 50 ppm and above.

Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.

Sensitization

Skin

For similar material(s): Did not cause allergic skin reactions when tested in guinea pigs.

Repeated Dose Toxicity

For the active ingredient(s): In animals, effects have been reported on the following organs: Adrenal gland. Kidney. Liver. Testes. Thyroid. Based on information for component(s): In animals, effects have been reported on the following organs: Lung. Thyroid. Gastrointestinal tract. Kidney. Liver. Urinary tract. In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

Chronic Toxicity and Carcinogenicity

Active ingredient did not cause cancer in laboratory animals. Contains naphthalene which has caused cancer in some laboratory animals. However, the relevance of this to humans is unknown.

Carcinogenicity Classifications:

Component	List	Classification
Cyclohexanone	ACGIH	Confirmed animal carcinogen with unknown relevance to humans.; Group A3
Naphthalene	IARC NTP	Possibly carcinogenic to humans.; 2B Anticipated carcinogen.

Developmental Toxicity

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

Reproductive Toxicity

For the active ingredient(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Cyclohexanone caused reduced growth and survival of offspring in an animal reproduction study. Dose levels producing this effect also caused central nervous system effects in parental animals.

Genetic Toxicology

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

12. Ecological Information

Toxicity

Based on information for a similar material: Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

For similar material(s): LC50, *Oncorhynchus mykiss* (rainbow trout), 96 h: 10.3 mg/l

Aquatic Plant Toxicity

For similar material(s): EC50, *Pseudokirchneriella subcapitata* (green algae), biomass growth inhibition: 8.6 mg/l

Toxicity to Micro-organisms

For similar material(s): EC50; activated sludge: 71 mg/l

Toxicity to Above Ground Organisms

Based on information for a similar material: contact LD50, *Apis mellifera* (bees): > 200 ug/bee

Based on information for a similar material: oral LD50, *Apis mellifera* (bees): > 171 ug/bee

Persistence and Degradability

Data for Component: Myclobutanil

No relevant data found.

Data for Component: Cyclohexanone

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
87 %	14 d	OECD 301C Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.21E-11 cm ³ /s	10.6 h	Estimated.

Theoretical Oxygen Demand: 2.61 mg/g

Data for Component: Solvent naphtha (petroleum), heavy aromatic

Biodegradation may occur under aerobic conditions (in the presence of oxygen). 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	10 Day Window
30 - 41 %	28 d	OECD 301D Test	fail

Data for Component: Propylene glycol

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
81 %	28 d	OECD 301F Test	pass
96 %	64 d	OECD 306 Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.28E-11 cm ³ /s	10 h	Estimated.

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
69.000 %	70.000 %	86.000 %	

Chemical Oxygen Demand: 1.53 mg/mg

Theoretical Oxygen Demand: 1.68 mg/mg

Data for Component: 1,2,4-Trimethylbenzene

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	10 Day Window
4 - 18 %	28 d	OECD 301C Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.670E-11 cm ³ /s	0.641 d	Estimated.

Theoretical Oxygen Demand: 3.19 mg/mg

Data for Component: Naphthalene

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 cm ³ /s	5.9 h	Estimated.

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
57.000 %	71.000 %	71.000 %	

Theoretical Oxygen Demand: 3.00 mg/mg

Bioaccumulative potentialData for Component: Myclobutanil

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): 2.94 Measured

Data for Component: Cyclohexanone

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): 0.81 Measured

Data for Component: Solvent naphtha (petroleum), heavy aromatic

Bioaccumulation: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

Partition coefficient, n-octanol/water (log Pow): 2.9 - 6.1 Measured

Bioconcentration Factor (BCF): 61 - 159; Fish

Data for Component: Propylene glycol**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).**Partition coefficient, n-octanol/water (log Pow):** -1.07 Measured**Bioconcentration Factor (BCF):** 0.09; Estimated.Data for Component: 1,2,4-Trimethylbenzene**Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).**Partition coefficient, n-octanol/water (log Pow):** 3.63 Measured**Bioconcentration Factor (BCF):** 33 - 275; Cyprinus carpio (Carp); MeasuredData for Component: Naphthalene**Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).**Partition coefficient, n-octanol/water (log Pow):** 3.3 Measured**Bioconcentration Factor (BCF):** 40 - 300; Fish; Measured**Mobility in soil**Data for Component: Myclobutanil**Mobility in soil:** Potential for mobility in soil is low (Koc between 500 and 2000)., Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.**Partition coefficient, soil organic carbon/water (Koc):** 518 **Henry's Law Constant (H):** 4.28E-09 atm*m3/mole MeasuredData for Component: Cyclohexanone**Mobility in soil:** Potential for mobility in soil is very high (Koc between 0 and 50).**Partition coefficient, soil organic carbon/water (Koc):** 15 Estimated.**Henry's Law Constant (H):** 1.04E-05 atm*m3/mole MeasuredData for Component: Solvent naphtha (petroleum), heavy aromatic**Mobility in soil:** No data available.Data for Component: Propylene glycol**Mobility in soil:** Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).**Partition coefficient, soil organic carbon/water (Koc):** < 1 Estimated.**Henry's Law Constant (H):** 1.2E-08 atm*m3/mole MeasuredData for Component: 1,2,4-Trimethylbenzene**Mobility in soil:** Potential for mobility in soil is low (Koc between 500 and 2000).**Partition coefficient, soil organic carbon/water (Koc):** 720 Estimated.**Henry's Law Constant (H):** 6.16E-03 atm*m3/mole; 25 °C MeasuredData for Component: Naphthalene**Mobility in soil:** Potential for mobility in soil is medium (Koc between 150 and 500).**Partition coefficient, soil organic carbon/water (Koc):** 240 - 1,300 Measured**Henry's Law Constant (H):** 2.92E-04 - 5.53E-04 atm*m3/mole; 25 °C Measured**Distribution in Environment: Mackay Level 1 Fugacity Model:**

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

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

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: Solvent naphtha (petroleum), heavy aromatic, Naphthalene, Cyclohexanone
Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III

IMDG

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: Solvent naphtha (petroleum), heavy aromatic, Naphthalene, Cyclohexanone
Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III
EMS Number: F-A,S-F
Marine pollutant.: Yes

ICAO/IATA

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: Solvent naphtha (petroleum), heavy aromatic, Naphthalene, Cyclohexanone
Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III
Cargo Packing Instruction: 964
Passenger Packing Instruction: 964
Additional Information

Reportable quantity: 37,078 lb – NAPHTHALENE, 49,900 lb – CYCLOHEXANONE

MARINE POLLUTANT

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
Myclobutanil	88671-89-0	20.0%
Naphthalene	91-20-3	0.3%

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
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	25.0%
Cyclohexanone	108-94-1	10.0%
Propylene glycol	57-55-6	6.0%

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
Cyclohexanone	108-94-1	10.0%
Naphthalene	91-20-3	0.3%

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.

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 birth defects or other reproductive harm.

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**

NFPA **Health** **Fire** **Reactivity**
 1 1 0

Revision

Identification Number: 1001719 / 1016 / Issue Date 05/24/2012 / Version: 3.2

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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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.