# **Dow AgroSciences**

# **Material Safety Data Sheet**

**Dow AgroSciences LLC** 

Product Name: DIMENSION\* 2EW Herbicide Issue Date: 11/23/2010
Print Date: 23 Nov 2010

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**

DIMENSION\* 2EW 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

Physical State: Liquid. Odor: Mild Hazards of product:

WARNING! Causes eye irritation. May cause allergic skin reaction. May cause skin irritation. May be harmful if swallowed. Isolate area. Elevated temperatures can cause hazardous polymerization. Toxic fumes may be released in fire situations.

# **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 severe eye irritation. May cause severe corneal injury. Vapor may cause lacrimation (tears). In humans, eye irritation resulted from brief (minutes) exposure to cyclohexanone vapor concentration of 50 ppm and above.

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**Skin Contact:** Brief contact may cause moderate skin irritation with local redness. May cause peeling of the skin.

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

**Skin Sensitization:** Has demonstrated the potential for contact allergy in mice.

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

**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.

**Effects of Repeated Exposure:** In animals, effects have been reported on the following organs: For the active ingredient(s): Liver. Kidney. Blood. Thyroid. Adrenal gland. Gall bladder. For the component(s) tested: Central nervous system. Spleen.

**Birth Defects/Developmental Effects:** Excessive ingestion of 2-ethylhexanol caused birth defects in laboratory animals only at doses toxic to the mother. Occupational exposure to 2-ethylhexanol by the inhalation or dermal routes poses no significant threat to the offspring. In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation. Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother.

**Reproductive Effects:** 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
Dithiopyr	97886-45-8	24.0 %
Cyclohexanone	108-94-1	13.0 %
2-Ethylhexanol	104-76-7	1.9 %
Toluene	108-88-3	0.1 %
Balance		61.0 %

## 4. First-aid measures

# **Description of first aid measures**

**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.

**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.

**Eye Contact:** Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.

**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

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. Chemical eye burns may require extended

irrigation. Obtain prompt consultation, preferably from an ophthalmologist. 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.

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# 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.

## 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: Sulfur oxides. Nitrogen oxides. Hydrogen fluoride. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Container may rupture from polymerization. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. When product is stored in closed containers, a flammable atmosphere can develop. Dense smoke is produced when product burns.

## Advice for firefighters

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. 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. 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. See Section 10 for more specific information. 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.

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# 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.

### Storage

See Section 10 for more specific information. 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	

Exposure Ellillo			
Component	List	Туре	Value
Toluene	ACGIH OSHA/Z2 OSHA/Z2 OSHA/Z2	TWA TWA Ceiling MAX. CONC	20 ppm BEI 200 ppm 300 ppm 500 ppm 10 minutes
Cyclohexanone	ACGIH ACGIH OSHA Table Z-1	TWA STEL PEL	20 ppm SKIN 50 ppm SKIN 200 mg/m3 50 ppm
Dithiopyr	Dow IHG	TWA	0.25 mg/m3

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 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. 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: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Viton. Butyl rubber. Neoprene. Chlorinated polyethylene. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). 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.

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**Respiratory Protection:** Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, 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:** Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

# **Engineering Controls**

**Ventilation:** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

# 9. Physical and Chemical Properties

**Appearance** 

Physical State Liquid.
Color Tan
Odor Mild

pH 4.57 (@ 1 %) pH Electrode (1% aqueous suspension)

Melting Point

Freezing Point

Boiling Point (760 mmHg)

Not applicable

No test data available

No test data available.

Flash Point - Closed Cup > 100 °C (> 212 °F) Pensky-Martens Closed Cup ASTM D 93

Evaporation Rate (Butyl No test data available

Acetate = 1)

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)** 1.001 Digital Density Meter (Oscillating Coil)

No test data available

Solubility in water (by emulsifiable

weight)

**Autoignition Temperature** 

Decomposition Temperature

sition

Dynamic Viscosity 34.3 mPa.s @ 20 ℃ Kinematic Viscosity No test data available

Liquid Density 1 g/cm3 @ 20 ℃ Digital density meter

# 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

Can occur. Elevated temperatures can cause hazardous polymerization. Polymerization can be catalyzed by: High temperature.

**Conditions to Avoid:** Some components of this product can decompose at elevated temperatures.

**Incompatible Materials:** Avoid contact with: Amines. Nitric acid. Oxidizers. Strong acids. Sulfuric acid.

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## **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 fluoride. Nitrogen oxides. Sulfur oxides.

# 11. Toxicological Information

## **Acute Toxicity**

Ingestion

LD50, Rat > 5,000 mg/kg

**Dermal** 

LD50, Rabbit > 5,000 mg/kg

Inhalation

LC50, 4 h, Aerosol, Rat, male and female > 5.41 mg/l

## Eye damage/eye irritation

May cause severe eye irritation. May cause severe corneal injury. Vapor may cause lacrimation (tears). 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 moderate skin irritation with local redness. May cause peeling of the skin.

#### Sensitization

Skin

Has demonstrated the potential for contact allergy in mice.

## **Repeated Dose Toxicity**

In animals, effects have been reported on the following organs: For the active ingredient(s): Liver. Kidney. Blood. Thyroid. Adrenal gland. Gall bladder. For the component(s) tested: Central nervous system. Spleen.

# **Chronic Toxicity and Carcinogenicity**

Active ingredient did not cause cancer in laboratory animals.

# **Carcinogenicity Classifications:**

Component	List	Classification
Cyclohexanone ACGIH		Confirmed animal carcinogen with
-		unknown relevance to humans.; Group A3

#### **Developmental Toxicity**

For the active ingredient(s): Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother. Excessive ingestion of 2-ethylhexanol caused birth defects in laboratory animals only at doses toxic to the mother. Occupational exposure to 2-ethylhexanol by the inhalation or dermal routes poses no significant threat to the offspring. In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation. Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother. Contains component(s) which did not cause birth defects in laboratory animals. The component(s) is/are: Cyclohexanone.

#### **Reproductive Toxicity**

In animal studies, active ingredient did not interfere with reproduction. 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): Negative in genetic toxicity tests. Animal genetic toxicity studies were negative. For some component(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative in some cases and positive in other cases. The majority and most reliable of the many genetic toxicity studies on toluene, both in vitro and in animals, indicate that it is not genetically toxic.

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# 12. Ecological Information

#### **Toxicity**

#### Data for Component: Dithiopyr

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, rainbow trout (Oncorhynchus mykiss), 96 h: 0.5 mg/l

#### **Aquatic Invertebrate Acute Toxicity**

LC50, water flea Daphnia magna, 48 h: > 1.1 mg/l

## **Toxicity to Above Ground Organisms**

oral LD50, bobwhite (Colinus virginianus): > 2,250 mg/kg dietary LC50, bobwhite (Colinus virginianus): > 5,620 ppm dietary LC50, mallard (Anas platyrhynchos): > 5,620 ppm contact LD50, Honey bee (Apis mellifera): 80 ug/bee

#### **Toxicity to Soil Dwelling Organisms**

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

#### Data for Component: Cyclohexanone

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 > 100 mg/L in the most sensitive species tested).

## Fish Acute & Prolonged Toxicity

LC50, golden orfe (Leuciscus idus), static, 48 h: 630 mg/l

### **Aquatic Invertebrate Acute Toxicity**

EC50, water flea Daphnia magna, 24 h, immobilization: 820 mg/l

### **Toxicity to Micro-organisms**

EC50, OECD 209 Test; activated sludge: > 1,000 mg/l

#### Data for Component: 2-Ethylhexanol

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

#### Fish Acute & Prolonged Toxicity

LC50, rainbow trout (Oncorhynchus mykiss), 96 h: 32 - 37 mg/l

#### **Aquatic Invertebrate Acute Toxicity**

LC50, water flea Daphnia magna, 48 h, lethality: 35.2 mg/l

#### **Aquatic Plant Toxicity**

EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), Growth rate inhibition, 72 h: 11.5 mg/l

#### **Toxicity to Micro-organisms**

EC50; bacteria, 16 h: 256 - 320 mg/l

# Data for Component: Toluene

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

LC50, rainbow trout (Oncorhynchus mykiss), static renewal, 96 h: 5.8 mg/l

#### **Aquatic Invertebrate Acute Toxicity**

EC50, water flea Daphnia magna, static, 24 h, immobilization: 7 mg/l

#### **Aquatic Plant Toxicity**

EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), biomass growth inhibition, 72 h: 12.5 mg/l

# **Toxicity to Micro-organisms**

IC50; bacteria, 16 h: 29 mg/l

# Toxicity to Soil Dwelling Organisms

LC50, Earthworm Eisenia foetida, adult: 150 - 280 mg/kg

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## **Persistence and Degradability**

Data for Component: Dithiopyr

Biodegradation may occur under aerobic conditions (in the presence of oxygen).

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 Tes	st pass
Indirect Photodegradation with OH Radicals			
Rate Constant	Atmosphe	ric Half-life	Method
1.21E-11 cm3/s	10.	6 h	Estimated.

Theoretical Oxygen Demand: 2.61 mg/g

#### <u>Data for Component: 2-Ethylhexanol</u>

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

**OECD Biodegradation Tests:** 

Biodegradation	Exposure Time	Method	10 Day Window
68 %	17 d	OECD 301B Test	pass
> 95 %	5 d	OECD 302B Test	pass

**Indirect Photodegradation with OH Radicals** 

Rate Constant	Atmospheric Half-life	Method
1.32E-11 cm3/s	9.7 h	Estimated.

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
26 - 70 %	75 - 81 %	86 - 87 %	

Chemical Oxygen Demand: 2.70 mg/mg Theoretical Oxygen Demand: 2.95 mg/mg

Data for Component: Toluene

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

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method		10 Day Window
100 %	14 d	OECD 301C	Test	pass
Indirect Photodegrad	ation with OH Radicals			
Rate Constant	Atmosphe	ric Half-life		Method
5.23E-12 cm3/s	2	d		Estimated.
Biological oxygen demand (BOD):				
BOD 5	BOD 10	BOD 20		BOD 28
53 - 56 %		59 - 80 %	0	

Theoretical Oxygen Demand: 3.13 mg/mg

## Bioaccumulative potential

Data for Component: Dithiopyr

Partition coefficient, n-octanol/water (log Pow): 4.75 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: 2-Ethylhexanol

**Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient, n-octanol/water (log Pow): 3.1 Measured

Data for Component: Toluene

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

Partition coefficient, n-octanol/water (log Pow): 2.73 Measured Bioconcentration Factor (BCF): 13.2 - 90; fish; Measured

# Mobility in soil

Data for Component: Dithiopyr

Partition coefficient, soil organic carbon/water (Koc): 20,500Henry's Law Constant (H):

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1.51E-09 atm\*m3/mole; 25 ℃ Measured

Data 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 Measured

Data for Component: 2-Ethylhexanol

**Mobility in soil:** Potential for mobility in soil is low (Koc between 500 and 2000).

Partition coefficient, soil organic carbon/water (Koc): 800 Estimated.

Henry's Law Constant (H): 2.49E-05 atm\*m3/mole Estimated.

Data for Component: Toluene

**Mobility in soil:** Potential for mobility in soil is very high (Koc between 0 and 50). **Partition coefficient, soil organic carbon/water (Koc):** 37 - 178 Estimated.

Henry's Law Constant (H): 6.46E-03 atm\*m3/mole; 25 ℃ Estimated.

# 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: OTHER REGULATED SUBSTANCES, LIQUID, NOS

**Technical Name: CYCLOHEXANONE** 

Hazard Class: 9 ID Number: NA3082 Packing Group: PG III

**IMDG** 

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

Technical Name: DITHIOPYR

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: DITHIOPYR

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

Cargo Packing Instruction: 914
Passenger Packing Instruction: 914

**Additional Information** 

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Reportable quantity: 38,462 lb - CYCLOHEXANONE

## MARINE POLLUTANT (DITHIOPYR)

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

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

# 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.

CAS#	Amount	
108-94-1	13.0%	
104-76-7	1.9%	
108-88-3	0.1%	
	104-76-7	108-94-1 13.0% 104-76-7 1.9%

# 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	13.0%
Toluene	108-88-3	0.1%

# 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

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## 16. Other Information

**Hazard Rating System** 

NFPA Health Fire Reactivity
2 1 0

#### Revision

Identification Number: 1002627 / 1016 / Issue Date 11/23/2010 / Version: 2.0

DAS Code: GF-1396

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

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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.