Material Safety Data Sheet
Dow AgroSciences LLC

Product Name: Goal 2XL Herbicide

Issue Date: 07/26/2012
Print Date: 26 Jul 2012

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
Goal 2XL Herbicide

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: amber
Physical State: Liquid.
Odor: Aromatic
Hazards of product:

WARNING! Combustible liquid and vapor. Causes skin irritation. May cause allergic skin reaction. May cause eye irritation. May be harmful if inhaled. Aspiration hazard. Can enter lungs and cause damage. Isolate area. Keep upwind of spill. Toxic fumes may be released in fire situations. Highly toxic to fish and/or other aquatic organisms. 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.
Skin Contact: Brief contact may cause severe skin irritation with pain and local redness.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Skin Sensitization: As product: Skin contact may cause an allergic skin reaction.
Inhalation: Prolonged excessive exposure to mist may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).
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: Blood. Liver. Spleen. Contains component(s) which have been reported to cause effects on the following organs in animals: Lung. Gastrointestinal tract. Thyroid. Urinary tract. Central nervous system.
Cancer Information: 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): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. N-methyl pyrrolidone has caused toxic effects to the fetus in laboratory animals at high dose levels with either mild or undetectable maternal toxicity.
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.

3. Composition Information

Component	CAS #	Amount
Oxyfluorfen	42874-03-3	22.3 %
N-Methyl-2-pyrrolidone	872-50-4	10.4 %
Isobutanol	78-83-1	1.5 %
Naphthalene	91-20-3	0.5 %
Balance	Not available	65.3 %

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.
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. Suitable emergency safety shower facility should be available in work area.
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 available in work area.
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. 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.

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.

Extinguishing Media to Avoid: Do not use direct water stream. May spread fire.

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 fluoride. 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. Dense smoke is produced when product burns. Container may rupture from gas generation in a fire situation.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. 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. No smoking in area. 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. Spills or discharge to natural waterways is likely to kill aquatic organisms.

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. Keep away from heat, sparks and flame. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage

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

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

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
N-Methyl-2-pyrrolidone	AIHA WEEL	TWA	40 mg/m3 10 ppm SKIN
Isobutanol	ACGIH	TWA	50 ppm
	OSHA Table Z-1	PEL	300 mg/m3 100 ppm
Oxyfluorfen	Dow IHG	TWA	0.2 mg/m3
Naphthalene	ACGIH	TWA	10 ppm SKIN
	ACGIH	STEL	15 ppm SKIN
	OSHA Table Z-1	PEL	50 mg/m3 10 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: Polyethylene. Ethyl vinyl alcohol laminate (“EVAL”). Polyvinyl chloride (“PVC” or “vinyl”). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Natural rubber (“latex”). Neoprene. Nitrile/butadiene rubber (“nitrile” or “NBR”). 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, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. 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	amber
Odor	Aromatic
Odor Threshold	No test data available
pH	6.51 (@ 1 %) *CIPAC MT 75*
Melting Point	Not applicable
Freezing Point	No test data available
Boiling Point (760 mmHg)	No test data available.
Flash Point - Closed Cup	76 °C (169 °F) *Closed Cup*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not applicable to liquids
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)	1.08
Solubility in water (by weight)	emulsifiable
Partition coefficient, n-octanol/water (log Pow)	No data available for this product.
Autoignition Temperature	No test data available
Decomposition Temperature	No test data available
Dynamic Viscosity	5.6 mPa.s @ 40 °C *OECD 114*
Kinematic Viscosity	No test data available
Explosive properties	No
Oxidizing properties	No
Liquid Density	No test data available
Surface tension	28.4 mN/m @ 20 °C

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: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: Avoid contact with: Acids. Amines. Bases. Oxidizers. Halogens.

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 fluoride.

11. Toxicological Information

Acute Toxicity

Ingestion

As product: LD50, rat 2,985 mg/kg

Dermal

As product: LD50, rat > 2,000 mg/kg

Inhalation

As product: LC50, 4 h, Aerosol, rat > 4.8 mg/l

No deaths occurred at this concentration.

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.

Skin corrosion/irritation

Brief contact may cause severe skin irritation with pain and local redness.

Sensitization

Skin

As product: Skin contact may cause an allergic skin reaction.

Respiratory

No relevant data found.

Repeated Dose Toxicity

For the active ingredient(s): In animals, effects have been reported on the following organs: Blood. Liver. Spleen. Contains component(s) which have been reported to cause effects on the following organs in animals: Lung. Gastrointestinal tract. Thyroid. Urinary tract. Central nervous system.

Chronic Toxicity and Carcinogenicity

For the active ingredient(s): An increase in spontaneously occurring tumors observed in mice is of questionable relevance. No increases in tumors were observed in rats. 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	Possibly carcinogenic to humans.; 2B
	NTP	Anticipated carcinogen.

Developmental Toxicity

For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. N-methyl pyrrolidone has caused toxic effects to the fetus in laboratory animals at high dose levels with either mild or undetectable maternal toxicity. For the active ingredient(s): 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.

Genetic Toxicology

For the active ingredient(s): In vitro 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 negative.

12. Ecological Information

Toxicity

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

Fish Acute & Prolonged Toxicity
LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 h: 2.8 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), flow-through test, 48 h: 0.33 mg/l
Aquatic Plant Toxicity
EyC50, Pseudokirchneriella subcapitata (green algae), 96 h: 0.0012 mg/l
Toxicity to Above Ground Organisms
oral LD50, Colinus virginianus (Bobwhite quail): > 2250 mg/kg bodyweight.
oral LD50, Apis mellifera (bees): 200 micrograms/bee
contact LD50, Apis mellifera (bees): > 431 micrograms/bee
Toxicity to Soil Dwelling Organisms
LC50, Eisenia fetida (earthworms), 14 d: 400 mg/kg

Persistence and Degradability

Data for Component: **Oxyfluorfen**

Material is expected to biodegrade only very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
Stability in Water (1/2-life):
3.9 d; 20 °C; pH 5 - 9
Theoretical Oxygen Demand: 1.305 mg/mg

Data for Component: **N-Methyl-2-pyrrolidone**

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

Biodegradation	Exposure Time	Method	10 Day Window
91 %	28 d	OECD 301B Test	pass
> 90 %	8 d	OECD 302B Test	Not applicable
73 %	28 d	OECD 301C Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
2.199E-11 cm3/s	0.486 d	Estimated.

Theoretical Oxygen Demand: 2.58 mg/mg

Data for Component: **Isobutanol**

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

Biodegradation	Exposure Time	Method	10 Day Window
70 - 80 %	28 d	OECD 301D Test	pass
90 %	14 d	OECD 301C Test	Not applicable

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
6.88E-12 cm3/s	1.55 d	Estimated.

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
64 - 69 %	73 - 79 %	72 - 81 %	

Chemical Oxygen Demand: 2.29 mg/mg
Theoretical Oxygen Demand: 2.59 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 cm3/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 potential

Data for Component: **Oxyfluorfen**

Bioconcentration Factor (BCF): 184 - 1,151; Lepomis macrochirus (Bluegill sunfish)

Data for Component: **N-Methyl-2-pyrrolidone**

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

Partition coefficient, n-octanol/water (log Pow): -0.38 Measured

Data for Component: **Isobutanol**

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

Partition coefficient, n-octanol/water (log Pow): 0.76 Measured

Bioconcentration Factor (BCF): 2; Estimated.

Data 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: **Oxyfluorfen**

Mobility in soil: Potential for mobility in soil is slight (Koc between 2000 and 5000).

Partition coefficient, soil organic carbon/water (Koc): 6,831**Henry's Law Constant (H):** 2.382E-02 Pa*m3/mole.; 25 ℃

Data for Component: **N-Methyl-2-pyrrolidone**

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): 21 Estimated.

Henry's Law Constant (H): 4.46E-08 atm*m3/mole; 25 ℃ Measured

Data for Component: **Isobutanol**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 2 Estimated.

Henry's Law Constant (H): 9.78E-06 atm*m3/mole; 25 ℃ Measured

Distribution in Environment: Mackay Level 1 Fugacity Model:

Air	Water.	Biota	Soil	Sediment
32.02 %	67.92 %	0 %	0.03 %	0.03 %

Data 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 ℃ 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: OXYFLUORFEN, NAPHTHALENE
Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III

IMDG
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical Name: OXYFLUORFEN, NAPHTHALENE
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 SUBSTANCE, LIQUID, N.O.S.
Technical Name: OXYFLUORFEN, NAPHTHALENE
Hazard Class: 9 **ID Number:** UN3082 **Packing Group:** PG III
Cargo Packing Instruction: 964
Passenger Packing Instruction: 964
Additional Information

Reportable quantity: 18,797 lb – NAPHTHALENE

MARINE POLLUTANT (OXYFLUORFEN)

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	Yes
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
Oxyfluorfen	42874-03-3	22.3%
N-Methyl-2-pyrrolidone	872-50-4	10.4%
Naphthalene	91-20-3	0.5%

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
N-Methyl-2-pyrrolidone	872-50-4	10.4%
Isobutanol	78-83-1	1.5%
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	<= 55.0 %

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
ISOBUTANOL	78-83-1	1.5%
Naphthalene	91-20-3	0.5%

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.

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
	2	2	0

Revision
Identification Number: 68756 / 1016 / Issue Date 07/26/2012 / Version: 1.7
DAS Code: GF-1190
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

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

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