



Blue Agri-Clean

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 06/15/2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Blue Agri-Clean

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Fuel: additive

1.3. Details of the supplier of the safety data sheet

Old World Industries, LLC
4065 Commercial Ave.
Northbrook, IL 60062 - USA
T (847) 559-2000
www.oldworldind.com

1.4. Emergency telephone number

Emergency number : (800) 424-9300; (703) 527 3887 (International)
Chemtrec

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

| | | |
|--|------|--|
| Flammable liquids, Category 4 | H227 | Combustible liquid |
| Carcinogenicity, Category 2 | H351 | Suspected of causing cancer |
| Specific target organ toxicity — Single exposure, Category 3, Narcosis | H336 | May cause drowsiness or dizziness |
| Aspiration hazard, Category 1 | H304 | May be fatal if swallowed and enters airways |

Full text of H statements : see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

GHS08

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H227 - Combustible liquid
H304 - May be fatal if swallowed and enters airways
H336 - May cause drowsiness or dizziness
H351 - Suspected of causing cancer

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P233 - Keep container tightly closed
P261 - Avoid breathing fume, mist, spray, vapors
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear personal protective equipment as required
P301+P310 - If swallowed: Immediately call doctor/physician or poison center
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P308+P313 - If exposed or concerned: Get medical advice/attention
P312 - Call doctor/physician or poison center if you feel unwell
P331 - Do NOT induce vomiting
P370+P378 - In case of fire: Use carbon dioxide (CO₂), Dry chemical, foam to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with

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local/regional/national/international regulations

2.3. Other hazards

Other hazards not contributing to the classification : SPARKS MAY IGNITE LIQUID AND VAPOR MAY CAUSE FLASH FIRE (OR EXPLOSION).

2.4. Unknown acute toxicity (GHS US)

64.5 percent of the mixture consists of ingredient(s) of unknown acute toxicity. (inhalation: vapor); 3.7 percent of the mixture consists of ingredient(s) of unknown acute toxicity. (inhalation: mist)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % by wt | GHS-US classification |
|---------------------------------------|----------------------|---------|--|
| naphtha,heavy aromatic | (CAS-No.) 64742-94-5 | 30 - 40 | Skin Irrit. 2, H315 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 |
| petroleum naphtha, hydrotreated light | (CAS-No.) 64742-47-8 | 30 - 40 | Asp. Tox. 1, H304 |
| 2-ethylhexyl nitrate | (CAS-No.) 27247-96-7 | 20 - 30 | Acute Tox. 4 (Inhalation), H332 Aquatic Chronic 2, H411 |
| 1,2,4-trimethylbenzene | (CAS-No.) 95-63-6 | 5 - 10 | Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Aquatic Chronic 2, H411 |
| naphthalene | (CAS-No.) 91-20-3 | 1 - 5 | Acute Tox. 4 (Oral), H302 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| 1,3,5-trimethylbenzene | (CAS-No.) 108-67-8 | 1 - 5 | Flam. Liq. 3, H226 STOT SE 3, H335 Aquatic Chronic 2, H411 |
| 1,2,3-trimethylbenzene | (CAS-No.) 526-73-8 | 1 - 5 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 |
| 2-ethyl-1-hexanol | (CAS-No.) 104-76-7 | 1 - 5 | Flam. Liq. 4, H227 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 STOT SE 3, H335 |

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Suspected of causing cancer.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes, lifting lower and upper lids. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. If vomiting occurs, prevent asphyxia/aspiration pneumonia.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation : May cause drowsiness or dizziness. Prolonged exposure can cause nervous system damage.
- Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard.

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Symptoms/effects after ingestion : May be fatal if swallowed and enters airways. Gastrointestinal complaints. Vomiting. Diarrhea. Abdominal pain. Central nervous system depression. Headache. Dizziness. Drowsiness. Weakness. When material is misted or when vapors are released from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry chemical. Foam.
Unsuitable extinguishing media : Do not use a heavy water stream. Container may slop over if solid jet (water/foam) is applied. Will float and can be reignited on water surface.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustible liquid.
Explosion hazard : May form flammable/explosive vapor-air mixture. Vapors may travel considerable distance to a source of ignition and flash back.
Reactivity : No data available.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
Other information : Wear positive pressure self-contained breathing apparatus (SCBA). Protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots and gloves).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid breathing fume, mist, spray, vapors.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. Keep away from heat sources, open flames, sparks. - No smoking. Product sampling is a potential source of personnel exposure to 2-ethylhexyl nitrate. Design and procedures should be developed to minimize exposure of personnel and the environment to fuel additive containing 2-ethylhexyl nitrate.
Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing fume, mist, spray, vapors. Use only outdoors or in a well-ventilated area.

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7.2. Conditions for safe storage, including any incompatibilities

| | |
|------------------------|---|
| Technical measures | : Proper grounding procedures to avoid static electricity should be followed. |
| Storage conditions | : Keep only in the original container in a cool, well ventilated place away from : Heat sources, hot surfaces, open flames, sparks. Keep in fireproof place. Keep container tightly closed. |
| Incompatible products | : Keep away from strong acids, strong bases and oxidizing agents. Nitriles. |
| Incompatible materials | : Sources of ignition. Direct sunlight. Heat sources. |
| Storage temperature | : < 40.00 °C (104 °F) |

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| 1,2,4-trimethylbenzene (95-63-6) | | |
|----------------------------------|-------------------------------------|--|
| ACGIH | ACGIH TWA (mg/m ³) | 123 mg/m ³ |
| ACGIH | ACGIH TWA (ppm) | 25 ppm (Trimethyl benzene (mixed isomers); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value) |
| OSHA | OSHA PEL (TWA) (mg/m ³) | 125 mg/m ³ |
| OSHA | OSHA PEL (TWA) (ppm) | 25 ppm |

| naphthalene (91-20-3) | | |
|-----------------------|--------------------------------------|---|
| ACGIH | ACGIH TWA (mg/m ³) | 52 mg/m ³ |
| ACGIH | ACGIH TWA (ppm) | 10 ppm |
| ACGIH | Remark (ACGIH) | application restricted to conditions in which there are negligible aerosol exposures, total hydrocarbon vapor, Skin - potential significant contribution to overall exposure by the cutaneous route |
| OSHA | OSHA PEL (TWA) (mg/m ³) | 50 mg/m ³ |
| OSHA | OSHA PEL (TWA) (ppm) | 10 ppm |
| OSHA | OSHA PEL (STEL) (mg/m ³) | 75 mg/m ³ |
| OSHA | OSHA PEL (STEL) (ppm) | 15 ppm |

| 1,3,5-trimethylbenzene (108-67-8) | | |
|-----------------------------------|-----------------|--|
| ACGIH | ACGIH TWA (ppm) | 25 ppm (Trimethyl benzene (mixed isomers); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value) |
| OSHA | Not applicable | |

| 1,2,3-trimethylbenzene (526-73-8) | | |
|-----------------------------------|-----------------|--|
| ACGIH | ACGIH TWA (ppm) | 25 ppm (Trimethyl benzene (mixed isomers); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value) |
| OSHA | Not applicable | |

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide a good standard of controlled ventilation (10 air changes per hour). Provide local exhaust or general room ventilation.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. In case of splash hazard: safety glasses. Insufficient ventilation: wear respiratory protection.

Materials for protective clothing:

GIVE GOOD RESISTANCE: nitrile rubber. neoprene. GIVE POOR RESISTANCE: Polyvinyl alcohol. Note: polyvinyl alcohol gloves are water soluble and should not be used when there is potential for water contact.

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Hand protection:

Wear protective gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing. Chemical resistant apron

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear respiratory protection



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---|
| Physical state | : Liquid |
| Color | : Colorless Amber |
| Odor | : petroleum-like odor |
| Odor threshold | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : 70 °C (158 °F) [Method Used: Pensky-Martens Closed Cup] |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapor pressure | : No data available |
| Relative vapor density at 20 °C | : No data available |
| Specific Gravity | : 0.88 @ 15.6 °C (60.1 °F) [Estimated] |
| Density | : 7.64 lbs/gal @ 15.6 °C (60.1 °F) |
| Solubility | : Water: Insoluble |
| Log Pow | : No data available |
| Log Kow | : No data available |
| Viscosity, kinematic | : 5 mm ² /s @ 40 °C (104 °F) |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Explosive limits | : No data available |

9.2. Other information

Other properties : Pour Point: -105 °C (-157 °F).

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Combustible liquid. May form flammable/explosive vapor-air mixture. May undergo self-accelerating, exothermic reaction if heated above 100 °C (212 °F).

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

10.5. Incompatible materials

Keep away from strong acids, strong bases and oxidizing agents. Nitriles.

10.6. Hazardous decomposition products

Fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| naphtha,heavy aromatic (64742-94-5) | |
|--|---------------------------|
| LD50 oral rat | > 5,000.00 mg/kg (Rat) |
| LD50 dermal rabbit | > 2,000.00 mg/kg (Rabbit) |
| LC50 inhalation rat (mg/l) | > 5.00 mg/l/4h (Rat) |

| 2-ethylhexyl nitrate (27247-96-7) | |
|--|---------------------------|
| LD50 oral rat | > 9,640.00 mg/kg (Rat) |
| LD50 dermal rabbit | > 4,820.00 mg/kg (Rabbit) |
| ATE US (gases) | 4,500.00 ppmv/4h |
| ATE US (vapors) | 11.00 mg/l/4h |
| ATE US (dust,mist) | 1.50 mg/l/4h |

| 2-ethyl-1-hexanol (104-76-7) | |
|-------------------------------------|---|
| LD50 oral rat | 3,290.00 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value) |
| LD50 dermal rat | > 3,000.00 mg/kg bodyweight (Rat; Experimental value; OECD 402: Acute Dermal Toxicity) |
| LD50 dermal rabbit | > 2,600.00 mg/kg bodyweight (Rabbit; Experimental value; Equivalent or similar to OECD 402) |
| ATE US (oral) | 3,290.00 mg/kg bodyweight |
| ATE US (gases) | 4,500.00 ppmv/4h |
| ATE US (vapors) | 11.00 mg/l/4h |
| ATE US (dust,mist) | 1.50 mg/l/4h |

| 1,2,4-trimethylbenzene (95-63-6) | |
|---|---|
| LD50 oral rat | > 5,000.00 mg/kg (Rat; Equivalent or similar to OECD 401; Literature; 6000 mg/kg bodyweight; Rat; Experimental value) |
| LD50 dermal rat | > 3,440.00 mg/kg (Rat; Read-across; OECD 402: Acute Dermal Toxicity) |
| LC50 inhalation rat (mg/l) | 18.00 mg/l/4h (Rat) |
| ATE US (gases) | 4,500.00 ppmv/4h |
| ATE US (vapors) | 18.00 mg/l/4h |
| ATE US (dust,mist) | 1.50 mg/l/4h |

| naphthalene (91-20-3) | |
|------------------------------|----------------------------|
| LD50 oral rat | > 1,100.00 mg/kg (Rat) |
| LD50 dermal rat | > 2,500.00 mg/kg (Rat) |
| LD50 dermal rabbit | > 20,000.00 mg/kg (Rabbit) |
| ATE US (oral) | 500.00 mg/kg bodyweight |

| 1,3,5-trimethylbenzene (108-67-8) | |
|--|---|
| LD50 oral rat | 6,000.00 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Read-across) |
| LD50 dermal rat | > 2,000.00 mg/kg bw/day (Rat; Read-across; Equivalent or similar to OECD 402) |
| LC50 inhalation rat (mg/l) | 24.00 mg/l/4h (Rat; Literature study) |
| ATE US (oral) | 6,000.00 mg/kg bodyweight |
| ATE US (vapors) | 24.00 mg/l/4h |
| ATE US (dust,mist) | 24.00 mg/l/4h |

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| | |
|-----------------------------------|--------------------------------|
| Skin corrosion/irritation | : Not classified |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Suspected of causing cancer. |

| | |
|------------------------------|--------------------------------------|
| naphthalene (91-20-3) | |
| IARC group | 2B - Possibly carcinogenic to humans |

| | |
|--|--------------------------------------|
| Reproductive toxicity | : Not classified |
| Specific target organ toxicity (single exposure) | : May cause drowsiness or dizziness. |

| | |
|---|---|
| petroleum naphtha, hydrotreated light (64742-47-8) | |
| Additional information | If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. |

| | |
|--|---|
| 2-ethylhexyl nitrate (27247-96-7) | |
| Additional information | Inhalation of 2-ethylhexyl nitrate may cause vasodilation resulting in reduced blood pressure and other cardiovascular effects. Symptoms include headache, dizziness, nausea, fatigue, heart palpitations, confusion and possible loss of consciousness. High concentrations may cause headaches, dizziness, nausea, behavioral changes, weakness, drowsiness and stupor. Absorption of 2-ethylhexyl nitrate through the skin may cause vasodilation resulting in reduced blood pressure and other cardiovascular effects. Ingestion of 2-ethylhexyl nitrate may cause vasodilation resulting in reduced blood pressure and other cardiovascular effects. Symptoms include headache, dizziness, nausea, fatigue, heart palpitations, confusion and possible loss of consciousness. |

| | |
|-------------------------------------|---|
| 2-ethyl-1-hexanol (104-76-7) | |
| Additional information | 2-Ethylhexanol may cause respiratory tract irritation |

| | |
|--|------------------|
| Specific target organ toxicity (repeated exposure) | : Not classified |
|--|------------------|

| | |
|---|--|
| petroleum naphtha, hydrotreated light (64742-47-8) | |
| Additional information | Repeated overexposure to petroleum naphtha can cause nervous system damage |

| | |
|-------------------------------------|---|
| 2-ethyl-1-hexanol (104-76-7) | |
| Additional information | Repeated overexposure to 2-ethylhexanol may result in liver and kidney damage. A 14-day dermal toxicity study of 2-ethylhexanol in rats showed blood effects, decreased spleen weight and decreased triglycerides |

| | |
|------------------------------|--|
| naphthalene (91-20-3) | |
| Additional information | Repeated overexposure to naphthalene may cause cataracts, destruction of red blood cells, fever, jaundice and kidney and liver damage. |

| | |
|---|---|
| Aspiration hazard | : May be fatal if swallowed and enters airways. |
| Potential adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |
| Symptoms/effects after inhalation | : May cause drowsiness or dizziness. Prolonged exposure can cause nervous system damage. |
| Symptoms/effects after skin contact | : Repeated exposure to this material can result in absorption through skin causing significant health hazard. |
| Symptoms/effects after ingestion | : May be fatal if swallowed and enters airways. Gastrointestinal complaints. Vomiting. Diarrhea. Abdominal pain. Central nervous system depression. Headache. Dizziness. Drowsiness. Weakness. When material is misted or when vapors are released from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|--|---|
| naphtha,heavy aromatic (64742-94-5) | |
| EC50 Daphnia 1 | 0.95 mg/l (EC50; 48 h) |
| LC50 fish 2 | 2.34 mg/l (LC50; 96 h; Oncorhynchus mykiss) |

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| | |
|--|---|
| naphtha,heavy aromatic (64742-94-5) | |
| Threshold limit algae 2 | 2.5 mg/l (EC50; 72 h) |
| 2-ethylhexyl nitrate (27247-96-7) | |
| Threshold limit algae 1 | 3.22 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Experimental value) |
| 2-ethyl-1-hexanol (104-76-7) | |
| EC50 Daphnia 1 | 39.00 mg/l (EC50; EU Method C.2; 48 h; Daphnia magna; Static system; Fresh water; Experimental value) |
| LC50 fish 2 | 17.10 mg/l (LC50; EU Method C.1; 96 h; Leuciscus idus; Flow-through system; Fresh water; Experimental value) |
| 1,2,4-trimethylbenzene (95-63-6) | |
| LC50 fish 1 | 7.72 mg/l (LC50; 96 h; Pimephales promelas; Flow-through system; Fresh water) |
| EC50 Daphnia 1 | 3.60 mg/l (LC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value) |
| Threshold limit algae 2 | 2.356 mg/l (EC50; ECOSAR; 96 h; Algae; Fresh water) |
| naphthalene (91-20-3) | |
| EC50 Daphnia 1 | 2.16 mg/l (EC50; 48 h; Daphnia magna) |
| LC50 fish 2 | 0.11 mg/l (LC50; 96 h; Oncorhynchus mykiss) |
| Threshold limit algae 1 | 0.4 mg/l (EC50; 72 h; Skeletonema costatum) |
| 1,3,5-trimethylbenzene (108-67-8) | |
| EC50 Daphnia 1 | 6.00 mg/l (LC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value) |
| Threshold limit algae 2 | 25 mg/l (EC50; DIN 38412-9; 48 h; Scenedesmus subspicatus; Static system; Fresh water; Experimental value) |

12.2. Persistence and degradability

| | |
|--|--|
| naphtha,heavy aromatic (64742-94-5) | |
| Persistence and degradability | Not readily biodegradable in water. |
| 2-ethylhexyl nitrate (27247-96-7) | |
| Persistence and degradability | Not readily biodegradable in water. |
| 2-ethyl-1-hexanol (104-76-7) | |
| Persistence and degradability | Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil. |
| 1,2,4-trimethylbenzene (95-63-6) | |
| Persistence and degradability | Not readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Low potential for mobility in soil. Photodegradation in the air. |
| Chemical oxygen demand (COD) | 0.44 g O ₂ /g substance |
| naphthalene (91-20-3) | |
| Persistence and degradability | Readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Photolysis in the air. |
| Biochemical oxygen demand (BOD) | 0.00 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 0.22 g O ₂ /g substance |
| ThOD | 2.99 g O ₂ /g substance |
| 1,3,5-trimethylbenzene (108-67-8) | |
| Persistence and degradability | Not readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorption to soil is possible. Photodegradation in the air. |
| Biochemical oxygen demand (BOD) | 0.10 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 0.32 g O ₂ /g substance |
| ThOD | 3.19 g O ₂ /g substance |
| BOD (% of ThOD) | 0.03 |
| 1,2,3-trimethylbenzene (526-73-8) | |
| Persistence and degradability | Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil. Photodegradation in the air. |

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12.3. Bioaccumulative potential

| naphtha,heavy aromatic (64742-94-5) | |
|--|--|
| Log Pow | 2.9 - 6.1 |
| Bioaccumulative potential | Bioaccumable. |
| 2-ethylhexyl nitrate (27247-96-7) | |
| Log Pow | 5.24 (Test data; OECD 117: Partition Coefficient (n-octanol/water), HPLC method) |
| Bioaccumulative potential | High potential for bioaccumulation (Log Kow > 5). |
| 2-ethyl-1-hexanol (104-76-7) | |
| BCF other aquatic organisms 1 | 25.33 (BCF; BCFWIN) |
| Log Pow | 2.90 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 25 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |
| 1,2,4-trimethylbenzene (95-63-6) | |
| BCF fish 1 | 31 - 275 (BCF; Other; 8 weeks; Cyprinus carpio) |
| Log Pow | 3.63 - 4.09 (Experimental value) |
| Bioaccumulative potential | Potential for bioaccumulation ($4 \geq \text{Log Kow} \leq 5$). |
| naphthalene (91-20-3) | |
| BCF fish 1 | 23 - 168 (BCF; 8 weeks; Cyprinus carpio) |
| Log Pow | 3.30 (Experimental value) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |
| 1,3,5-trimethylbenzene (108-67-8) | |
| BCF fish 2 | 161.00 (BCF) |
| Log Pow | 3.42 - 4.13 (Experimental value) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |
| 1,2,3-trimethylbenzene (526-73-8) | |
| BCF fish 1 | 133 - 259 (BCF) |
| Log Pow | 3.66 (Experimental value) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

12.4. Mobility in soil

| 2-ethylhexyl nitrate (27247-96-7) | |
|--|---|
| Log Koc | Koc,OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC); 3.75; Experimental value |
| 2-ethyl-1-hexanol (104-76-7) | |
| Surface tension | 0.00 N/m (20 °C; 0.81 g/l) |
| Log Koc | Koc,PCKOCWIN v1.66; 26.01; Calculated value |
| 1,2,4-trimethylbenzene (95-63-6) | |
| Surface tension | 0.03 N/m |
| Log Koc | log Koc,3.04; Calculated value |
| Ecology - soil | May be harmful to plant growth, blooming and fruit formation. |
| naphthalene (91-20-3) | |
| Surface tension | 0.03 N/m (100 °C) |
| 1,3,5-trimethylbenzene (108-67-8) | |
| Surface tension | 0.03 N/m |
| Log Koc | log Koc,2.87; Calculated value |
| Ecology - soil | May be harmful to plant growth, blooming and fruit formation. |

12.5. Other adverse effects

| | |
|--------------------------|---------------------------------------|
| Effect on global warming | : No known effects from this product. |
| Other information | : Avoid release to the environment. |

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Product/Packaging disposal recommendations : Dispose of contents/container to appropriate waste disposal facility, in accordance with local/regional/national/international regulations.
- Additional information : Handle empty containers with care because residual vapors are flammable.
- Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

- Transport document description : NA1993 Combustible liquid, n.o.s. (Petroleum naphtha, 2-Ethylhexyl nitrate) R.Q. Naphthalene 100 lbs, 3, III
- UN-No.(DOT) : NA1993
- Proper Shipping Name (DOT) : Combustible liquid, n.o.s.
(Petroleum naphtha, 2-Ethylhexyl nitrate) R.Q. Naphthalene 100 lbs
- Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- Packing group (DOT) : III - Minor Danger
- Marine pollutant : Yes (IMDG only)



- DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
- DOT Packaging Bulk (49 CFR 173.xxx) : 241
- DOT Symbols : D - Proper shipping name for domestic use only, or to and from Canada,G - Identifies PSN requiring a technical name
- DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 150
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L
- DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
- Emergency Response Guide (ERG) Number : 128
- Other information : No supplementary information available.

Transportation of Dangerous Goods

Refer to current TDG Canada for further Canadian regulations

Transport by sea

- UN-No. (IMDG) : 3082
- Transport document description (IMDG) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Naphthalene, Petroleum naphtha), 9, III
- Class (IMDG) : 9 - Miscellaneous dangerous substances and articles
- Packing group (IMDG) : III - substances presenting low danger

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| | |
|---------------------------|-------------------------|
| Subsidiary risk (IMDG) | : Excepted Quantity: E1 |
| Limited quantities (IMDG) | : 5 L |
| EmS-No. (1) | : F-A |
| EmS-No. (2) | : S-F |

Air transport

| | |
|---------------------------------------|--|
| UN-No. (IATA) | : 3082 |
| Transport document description (IATA) | : UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Naphthalene, Petroleum naphtha), 9, III |
| Class (IATA) | : 9 - Miscellaneous Dangerous Goods |
| Packing group (IATA) | : III - Minor Danger |
| Subsidiary risks (IATA) | : Limited Quantities - Passenger Aircraft: Quantity Limitation: 30 kg; Packaging instructions: Y964 |

SECTION 15: Regulatory information

15.1. US Federal regulations

| Blue Agri-Clean | |
|---|--|
| EPA TSCA Regulatory Flag | United States inventory (TCSA 8b): All components are listed or exempt |
| CERCLA RQ | 2888 lb(s) (1310 kgs) <i>Calculated</i> This is the amount of product/material required to be released before CERCLA reporting is required. (Naphthalene CAS # 91-20-3) |
| RQ (Reportable quantity, section 304 of EPA's List of Lists) | 100 lb(s) (Naphthalene CAS # 91-20-3 [3.5% by Weight]) |
| SARA Section 311/312 Hazard Classes | Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard |
| SARA Section 313 - Emission Reporting | 5.2 % by weight (1,2,4-trimethylbenzene CAS# 95-63-6) Reporting threshold for other uses - 10000 lbs; Reporting threshold for manufacturing and processing - 25000 lbs 3.5% by weight (naphthalene CAS# 91-20-3) Reporting threshold for other uses - 10000 lbs; Reporting threshold for manufacturing and processing - 25000 lbs |
| naphtha,heavy aromatic (64742-94-5) | |
| SARA Section 311/312 Hazard Classes | Fire hazard Immediate (acute) health hazard |
| petroleum naphtha, hydrotreated light (64742-47-8) | |
| EPA TSCA Regulatory Flag | United States inventory (TCSA 8b): All components are listed or exempted |
| SARA Section 311/312 Hazard Classes | Fire hazard Delayed (chronic) health hazard |
| 2-ethylhexyl nitrate (27247-96-7) | |
| SARA Section 311/312 Hazard Classes | Fire hazard Immediate (acute) health hazard |
| 2-ethyl-1-hexanol (104-76-7) | |
| SARA Section 311/312 Hazard Classes | Fire hazard Immediate (acute) health hazard |
| 1,2,4-trimethylbenzene (95-63-6) | |
| Subject to reporting requirements of United States SARA Section 313 | |
| SARA Section 311/312 Hazard Classes | Fire hazard Immediate (acute) health hazard |
| SARA Section 313 - Emission Reporting | Subject to Form R - Reporting requirements; Subject to Supplier notification |
| naphthalene (91-20-3) | |
| Subject to reporting requirements of United States SARA Section 313 | |
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard Delayed (chronic) health hazard |
| SARA Section 313 - Emission Reporting | Subject to Form R - Reporting requirements; Subject to Supplier notification |

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15.2. International regulations

CANADA

| Blue Agri-Clean | |
|----------------------|---|
| WHMIS Classification | This SDS has been prepared according to the criteria of the Hazardous Products Regulations (HPR) (WHMIS 2015) and the SDS contains all of the information required by the HPR. Applicable GHS information is listed in section 2.2 of this SDS. |

EU-Regulations

No additional information available

National regulations

| Blue Agri-Clean |
|--|
| DSL (Canada): The intentional ingredients of this product are listed |

| 1,2,4-trimethylbenzene (95-63-6) |
|--|
| Listed on the Canadian IDL (Ingredient Disclosure List) Listed on Title V |

| naphthalene (91-20-3) |
|--|
| Listed on the Canadian IDL (Ingredient Disclosure List) Listed on Title V Listed on the SC Toxic Air Pollutants List Listed on RCRA Hazardous Substances Napthalene (91-20-3) RCRA Code: U165 Listed on CERCLA Hazardous Substances List (RQ 100 lb) Clean Water Act (CWA) 307 Clean Water Act (CWA) 311 |

| 1,3,5-trimethylbenzene (108-67-8) |
|---|
| Listed on the Canadian IDL (Ingredient Disclosure List) |

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, substance(s) known to the state of California to cause cancer, developmental toxicity and/or reproductive toxicity

| naphthalene (91-20-3) | | | | |
|---|---|---|---|----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) |
| Yes | No | No | No | 5.8 µg/day |

| 2-ethyl-1-hexanol (104-76-7) |
|---|
| U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List |

| 1,2,4-trimethylbenzene (95-63-6) |
|--|
| U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List |

| naphthalene (91-20-3) |
|---|
| U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List New Jersey- Environmental Hazardous Substances List: SN 1322 TPQ: 500 lb (Reportable at the de minimis quantity of >0.1%) New York- Reporting of Releases Par 597- List of Hazardous Substances: 100 lb RQ (air); 1 lb RQ (land/water) U.S. - Pennsylvania - RTK (Right to Know) List |

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1,3,5-trimethylbenzene (108-67-8)

U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

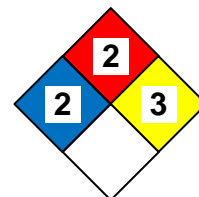
Revision date : 06/15/2017

Other information : None.

Full text of H-statements:

| | |
|------|--|
| H226 | Flammable liquid and vapor |
| H227 | Combustible liquid |
| H302 | Harmful if swallowed |
| H304 | May be fatal if swallowed and enters airways |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H332 | Harmful if inhaled |
| H335 | May cause respiratory irritation |
| H336 | May cause drowsiness or dizziness |
| H351 | Suspected of causing cancer |
| H400 | Very toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |
| H411 | Toxic to aquatic life with long lasting effects |

- NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- NFPA fire hazard : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.
- NFPA reactivity : 3 - Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction but that require a strong initiating source or must be heated under confinement before initiation.



Hazard Rating

- Health : 2 Moderate Hazard - Temporary or minor injury may occur
- Flammability : 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 °F (37 °C) but below 200 °F (93 °C). (Classes II & IIIA)
- Physical : 3 Serious Hazard - Materials that may form explosive mixtures with water and are capable of detonation or explosive reaction in the presence of a strong initiating source. Materials may polymerize, decompose, self-react, or undergo other chemical change at normal temperature and pressure with moderate risk of explosion

SDS GHS US (GHS HazCom 2012) OWI

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