

**Precautionary Statements - Prevention**

Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Get medical advice/attention if you feel unwell
IF INHALED: 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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight-% |
|---------------|-----------|-----------|
| Atrazine | 1912-24-9 | 85.8-91.2 |

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

| | |
|-----------------------|---|
| General Advice | When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment. If exposed or concerned: Get medical advice/attention. |
| Eye Contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice. |
| Skin Contact | IF ON SKIN: Wash with plenty of soap and water. |
| Inhalation | Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Call a poison control center or doctor for further treatment advice. |
| Ingestion | Immediately call a poison center or doctor/physician. Do not induce vomiting, unless directed by medical personnel. Never give anything by mouth to an unconscious person. If conscious, give 1 glass of water to dilute. |

Most important symptoms and effects

| | |
|-----------------|--|
| Symptoms | Mild eye, skin, and/or respiratory irritation. |
|-----------------|--|

Indication of any immediate medical attention and special treatment needed

| | |
|---------------------------|--|
| Notes to Physician | Treat symptomatically. If ingested, induce emesis or lavage stomach. There is no specific antidote for atrazine. The use of an aqueous slurry of activated charcoal may be considered. |
|---------------------------|--|

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Foam. Carbon dioxide (CO₂). Dry chemical.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Dust can form an explosive mixture with air.

Hazardous Combustion Products Burning will produce toxic fumes and gases.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Reclaim where possible. Vacuum or sweep up material and place in a disposal container. Wash area with soap and water. Pick up wash liquid with inert absorbent and place in a chemical waste container for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink, smoke, or apply cosmetics while handling this product. Do not breathe dust. Dust can form an explosive mixture with air.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Keep/store only in original container. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Store at ambient conditions. Store locked up.

Incompatible Materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-----------------------|--------------------------|------------------------------------|--------------------------|
| Atrazine 1912-24-9 | TWA: 5 mg/m ³ | (vacated) TWA: 5 mg/m ³ | TWA: 5 mg/m ³ |

Appropriate engineering controls

Engineering Controls

Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Wear safety glasses with side shields (or goggles). Goggles are recommended.

Skin and Body Protection

Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear long-sleeved shirt, long pants, and shoes plus socks. Use chemical resistant gloves, such as P.V.C., butyl-rubber, nitrile-rubber, or neoprene.

Respiratory Protection

NIOSH-approved respirator or mask in the absence of adequate ventilation.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Take off all contaminated clothing and wash it before reuse. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|-------------------------------------|---|-------------------------|--------------------|
| Physical State | Solid | Odor | Weak earthy, loamy |
| Appearance | Light beige to brown granules | Odor Threshold | Not determined |
| Color | Light beige to brown | Remarks • Method | |
| <u>Property</u> | <u>Values</u> | | |
| pH | 8.5 (1% w/w dilution in deionized water) | | |
| Melting Point/Freezing Point | Not determined | | |
| Boiling Point/Boiling Range | Not determined | | |
| Flash Point | Not determined | | |
| Evaporation Rate | Not applicable | | |
| Flammability (Solid, Gas) | Not determined | | |
| Upper Flammability Limits | Not applicable | | |
| Lower Flammability Limit | Not applicable | | |
| Vapor Pressure | 2.9x10 ⁻⁷ mmHg | @ 68°F (20 ° C) | |
| Vapor Density | Not determined | | |
| Specific Gravity | Not determined | | |
| Water Solubility | 33 mg/L @ 68°F (20°C) | | |
| Solubility in other solvents | Not determined | | |
| Partition Coefficient | Not determined | | |
| Auto-ignition Temperature | 480 °C / 896 °F | | |
| Decomposition Temperature | Not determined | | |
| Kinematic Viscosity | Not determined | | |
| Dynamic Viscosity | Not determined | | |
| Explosive Properties | Dust can form an explosive mixture with air | | |

Oxidizing Properties Not determined
Bulk Density 0.48 g/ml

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children.

Incompatible Materials

None known based on information supplied.

Hazardous Decomposition Products

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes.

Skin Contact May be harmful in contact with skin.

Inhalation Harmful if inhaled.

Ingestion Do not ingest.

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|-----------------------|---------------------|---|--|
| Atrazine 1912-24-9 | = 672 mg/kg (Rat) | > 2000 mg/kg (Rat) = 7500 mg/kg (Rabbit) | = 5200 mg/m ³ (Rat) 4 h > 5.1 mg/L (Rat) 4 h |

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Not classifiable as a human carcinogen.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|-----------------------|-------|---------|-----|------|
| Atrazine 1912-24-9 | | Group 3 | | |

Legend

IARC (International Agency for Research on Cancer)

Group 3 IARC components are "not classifiable as human carcinogens"

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Product Information (Numerical measures of toxicity)**Acute Oral LD50 (Rat):** 3,129 mg/kg**Acute Dermal LD50 (Rabbit):** >5,050 mg/kg**Acute Inhalation LC50 (Rat):** >2.5 mg/L (4-hr)**Eye Irritation:** Minimally irritating.**Dermal Irritation:** Non-irritating.**Dermal Sensitization:** Not a sensitizer.**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Very toxic to aquatic life with long lasting effects. Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

Component Information

| Chemical Name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|-----------------------|--|--|----------------------------|---|
| Atrazine 1912-24-9 | 0.03: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50 0.014 - 0.027: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50 semi-static 0.072: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50 static 0.13: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 0.2: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 0.004: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static 0.0096 - 0.07: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static 0.0929: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 semi-static | 4.5 - 11: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 3 - 6.75: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 semi-static 3 - 6.75: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static 16: 96 h <i>Lepomis macrochirus</i> mg/L LC50 8: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 23.999: 96 h <i>Lepomis macrochirus</i> mg/L LC50 semi-static 19: 96 h <i>Cyprinus carpio</i> mg/L LC50 static 15.7 - 20.2: 96 h <i>Cyprinus carpio</i> mg/L LC50 semi-static 5.4 - 8.4: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 4.1: 96 h <i>Pimephales promelas</i> mg/L LC50 static 4.3: 96 h <i>Poecilia reticulata</i> mg/L LC50 static | EC50 > 86 mg/L 5 min | 5.2 - 8.1: 48 h <i>Daphnia magna</i> mg/L EC50 Static |

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

| Chemical Name | Partition Coefficient |
|-----------------------|-----------------------|
| Atrazine 1912-24-9 | 2.59 |

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

| | |
|-------------------------------|--|
| Disposal of Wastes | Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance. |
| Contaminated Packaging | Disposal should be in accordance with applicable regional, national and local laws and regulations. |

14. TRANSPORT INFORMATION

| | |
|-------------------|--|
| <u>DOT</u> | Package less than 882 Lbs. (400 Kgs.): Not regulated |
| | Package over 882 Lbs. (400 Kgs.): |
| | UN 3077, Environmentally hazardous substance, solid, n.o.s. (atrazine), 9, PG III, Marine Pollutant. |

IATA

| | |
|-----------------------------|---|
| UN/ID No | UN3077 |
| Proper Shipping Name | Environmentally hazardous substance, solid, n.o.s. (atrazine) |
| Hazard Class | 9 |
| Packing Group | III |
| Description | Marine Pollutant |

IMDG

| | |
|-----------------------------|---|
| UN/ID No | UN3077 |
| Proper Shipping Name | Environmentally hazardous substance, solid, n.o.s. (atrazine) |
| Hazard Class | 9 |
| Packing Group | III |
| Marine Pollutant | Marine Pollutant |

15. REGULATORY INFORMATION

International Inventories

| Chemical Name | TSCA | DSL | NDSL | EINECS | ELINCS | ENCS | IECSC | KECL | PICCS | AICS |
|---------------|---------|-----|------|---------|--------|---------|-------|---------|-------|------|
| Atrazine | Present | X | | Present | | Present | X | Present | X | X |

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
- ENCS - Japan Existing and New Chemical Substances*
- IECSC - China Inventory of Existing Chemical Substances*
- KECL - Korean Existing and Evaluated Chemical Substances*
- PICCS - Philippines Inventory of Chemicals and Chemical Substances*
- AICS - Australian Inventory of Chemical Substances*

US Federal Regulations

SARA 311/312 Hazard Categories

| | |
|------------------------------|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | No |
| Fire Hazard | Yes |

| | |
|--|----|
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name | CAS No | Weight-% | SARA 313 - Threshold Values % |
|----------------------|-----------|-----------|-------------------------------|
| Atrazine - 1912-24-9 | 1912-24-9 | 85.8-91.2 | 1.0 |

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|-----------------------|------------|---------------|--------------|
| Atrazine 1912-24-9 | X | X | X |

EPA Pesticide Registration Number 66222-229**EPA Statement**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label

Signal Word: Caution

Harmful if swallowed. Do not breathe dust or spray mist. Avoid contact with eyes, skin, or clothing

Difference between SDS and EPA pesticide label

| | EPA | OSHA |
|--------------------------------------|----------------------|---|
| Signal Word | Caution | Warning |
| Acute toxicity - Oral | Harmful if swallowed | N/A |
| Acute toxicity - Dermal | N/A | May be harmful in contact with skin |
| Acute toxicity - Inhalation (Vapors) | N/A | Harmful if inhaled |
| STOT - repeated exposure | N/A | May cause damage to organs through prolonged or repeated exposure |

16. OTHER INFORMATION

| | | | | |
|--------------------|-----------------------|---------------------|-------------------------|----------------------------|
| <u>NFPA</u> | Health Hazards | Flammability | Instability | Special Hazards |
| | 1 | 2 | 0 | None |
| <u>HMIS</u> | Health Hazards | Flammability | Physical Hazards | Personal Protection |
| | 1 | 2 | 0 | See section 8 |

Issue Date: 28-Aug-2013
Revision Date: 06-Jan-2016
Revision Note: Updated format from 13-Jan-2015

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet