


1. Identification

Product identifier	Ecozin™ 3% EC	
Other means of identification		
SDS number	280	
Product registration number	5481-476	
Synonyms	Amazin™ 3% EC * Ornazin™ 3% EC * Aza 3% EC	
Recommended use	Botanical Insecticide, Repellant, Insect Growth Regulator and Nematicide.	
Recommended restrictions	Do not handle without appropriate PPE (see section 8). Pregnant or breast feeding women must not handle this product. Keep out of the Reach of Children!	
EPA Registration number	EPA: 5481-476	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	AMVAC Chemical Corporation	
Address	4695 MacArthur Court Suite 1200 Newport Beach, CA 92660 United States	
Telephone	AMVAC Chemical Corp	949-260-1200
	AMVAC Chemical Corp	949-260-6270(FAX)
Website	www.amvac.com	
E-mail	CustServ@amvac.com	
Emergency phone number	Medical	888-681-4261
	CHEMTREC® (USA+Canada)	800-424-9300
	Product Use	888-462-6822
	CHEMTREC® (Outside USA)	+1-703-527-3887

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		
		
Signal word	Warning	

Hazard statement	Combustible liquid. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from flames and hot surfaces-No smoking. Do not breathe mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. In case of fire: Use appropriate media to extinguish.
Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	This is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced in section 15. The pesticide label also includes other important information, including directions for use.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Azadirachtin		11141-17-6	3.0 %
THFA		97-99-4	> 60%

4. First-aid measures

Inhalation	Move to fresh air. Call a poison center or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects. Irritation of eyes.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical	The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Combustible liquid.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Wear appropriate protective equipment and clothing during clean-up. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Siphon the spilled liquid into a recovery drum for reuse or disposal, depending on the circumstances. Clean the area as described for a small spill. Small Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the remaining spilled material and place into a container for later disposal. Following product recovery, flush area with water. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.
Environmental precautions	

7. Handling and storage

Precautions for safe handling	Do not handle until all safety precautions have been read and understood. Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. Store in cool place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
THFA (CAS 97-99-4)	TWA	2 mg/m ³ 0.5 ppm

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Provide eyewash station and safety shower.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Chemical respirator with organic vapor cartridge and full facepiece.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards	Not applicable.

General hygiene considerations

Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state Liquid.

Form Liquid.

Color Clear brown.

Odor Slightly pungent odor

Odor threshold Not available.

pH 4.2 - 4.4 (5% solution)

Melting point/freezing point -112 °F (-80 °C) estimated

Initial boiling point and boiling range 352.4 °F (178 °C) estimated

Flash point 167 °F (75 °C) estimated

Evaporation rate 0.03 (butyl acetate = 1.00)

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 1.5 % estimated

Flammability limit - upper (%) 9.7 % estimated

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 8.32E-01 hPa estimated

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Emulsifies

Solubility (solvents) Soluble in alcohols and low molecular weight ketones

Auto-ignition temperature 540 °F (282 °C) estimated

Decomposition temperature Not available.

Viscosity Not available.

Other information

Bulk density 9.01 lb/gal

Density 1.08 g/cm³

Explosive properties Not explosive.

Flammability class Combustible IIIA estimated

Oxidizing properties Not oxidizing.

Specific gravity 1.052 estimated

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products Emits hazardous fumes and smoke of unknown composition when heated to decomposition or burned.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
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Information on toxicological effects

Acute toxicity	Not known.
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Product	Species	Test Results
Ecozin™ 3% EC		
<u>Acute</u>		
Dermal		
<i>Liquid</i>		
LD50	Rabbit	> 5050 mg/kg
Oral		
<i>Liquid</i>		
LD50	Rat	> 5050 mg/kg

Skin corrosion/irritation	Causes skin irritation.
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Serious eye damage/eye irritation	Causes serious eye irritation.
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Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
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Skin sensitization	Skin sensitizer.
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Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
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Carcinogenicity	Not classifiable as to carcinogenicity to humans.
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IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	Suspected of damaging fertility or the unborn child.
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Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.
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Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
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Aspiration hazard	Not an aspiration hazard.
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Chronic effects	May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.
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12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Components	Species		Test Results
Azadirachtin (CAS 11141-17-6)			
Aquatic			
Acute			
Fish	LC50	Chinook salmon (Oncorhynchus tshawytscha)	4 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.		
Bioaccumulative potential			
Mobility in soil	No data available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		
13. Disposal considerations			
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.		
Local disposal regulations	Dispose in accordance with all applicable regulations.		
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.		
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Dispose of container and residues in accordance with all applicable regulations.		
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.		
14. Transport information			
DOT			
Not regulated as dangerous goods.			
IATA			
Not regulated as dangerous goods.			
Read safety instructions, SDS and emergency procedures before handling.			
IMDG			
Not regulated as dangerous goods.			
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.		
15. Regulatory information			
US federal regulations	<p>This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.</p> <p>This product is currently registered under EPA/FIFRA Regulations. It is a violation of Federal law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.</p> <p>This is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.</p> <p>WARNING: Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear long-sleeved shirt, long pants, socks, shoes and gloves. Wear goggles, face shield or safety glasses. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.</p> <p>ENVIRONMENTAL HAZARDS</p> <p>This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water when disposing of equipment washwaters.</p>		
Toxic Substances Control Act (TSCA)			

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical

Classified hazard categories	Flammable (gases, aerosols, liquids, or solids) Skin corrosion or irritation Serious eye damage or eye irritation Reproductive toxicity Specific target organ toxicity (single or repeated exposure)
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SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.**US state regulations****California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

THFA (CAS 97-99-4)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision**Issue date** Aug-31-2015**Revision date** Jul-08-2021

References

ACGIH®: American Conference of Governmental Industrial Hygienists
 CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
 EPA: Environmental Protection Agency
 FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act
 IARC: International Agency for Research on Cancer
 NTP: National Toxicology Program
 OSHA: Occupational Safety and Health Agency
 SARA: Superfund Amendments and Reauthorization Act
 TSCA: Toxic Substances Control Act
 DOT: Department of Transportation
 IMDG: International Maritime Dangerous Goods
 IATA: International Air Transport Association

Version # 3.1

HMIS® ratings

Health: 2*
Flammability: 2
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 2
Instability: 0

Disclaimer

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Revision information

Composition / Information on Ingredients: Component Summary
Physical and chemical properties: Color
Regulatory information: US federal regulations
Other information, including date of preparation or last revision: Disclaimer