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SECTION 1. IDENTIFICATION

Product identifier

Trade name : Amertrol™ HT3010
deposit inhibitor
™ Trademark, Solenis or its subsidiaries or affiliates,
registered in various countries

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet Solenis LLC 500 Hercules Road Wilmington, Delaware 19808 United States of America (USA) RegulatoryRequestsNA@solenis.com	Emergency telephone number 1-844-SOLENIS (844-765-3647) Product Information Contact your local Solenis representative
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SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

GHS label elements

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

Other hazards


None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
ORGANIC ACID	Trade Secret	Flam. Liq. 4; H227 Acute Tox. 4; H302 Acute Tox. 3; H311 Skin Corr. 1A; H314 Eye Dam. 1; H318 STOT SE 3; H335	>= 0.1 - < 0.5

SECTION 4. FIRST AID MEASURES

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- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.
 If unconscious, place in recovery position and seek medical advice.
 If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
 Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
 Never give anything by mouth to an unconscious person.
 If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
 Water spray
 Foam
 Carbon dioxide (CO2)
 Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon monoxide
 Carbon dioxide (CO2)
- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
 Comply with all applicable federal, state, and local regulations.

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Environmental precautions : Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.

Conditions for safe storage : Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ORGANIC ACID	Trade Secret	TWA	20 ppm	ACGIH
		TWA	20 ppm 70 mg/m3	NIOSH REL
		TWA	20 ppm 70 mg/m3	OSHA P0


Engineering measures : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).

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Wear as appropriate:
Safety shoes

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : Colorless to light yellow

Odour : No data available

Odour Threshold : No data available

pH : 5.5 - 10.0

Melting point/freezing point : 0 °C

Boiling point/boiling range : 98 - 103 °C

Flash point : does not flash

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Self-ignition : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : 28 hPa (25 °C)

Relative vapour density : No data available

Relative density : No data available

Density : 1.17 - 1.23 g/cm³ (22 °C)

Solubility(ies)


Water solubility : completely miscible

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity

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Viscosity, dynamic : 100 - 300 mPa.s (22 °C)
 Viscosity, kinematic : No data available
 Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.
 Chemical stability : Stable under recommended storage conditions.
 Possibility of hazardous reactions : Product will not undergo hazardous polymerization.
 Incompatible materials : Strong oxidizing agents
 Hazardous decomposition products : **Carbon monoxide**
Carbon dioxide (CO₂)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:

ORGANIC ACID:

Acute oral toxicity : LD 50 (Rat, male): 1,320 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LD 50 (Rat): 7.1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD 50 (Rabbit): 500 - 1,000 mg/kg


Skin corrosion/irritation

Not classified based on available information.

Components:

ORGANIC ACID:

Method: OECD Test Guideline 404
Result: Corrosive after 3 minutes or less of exposure

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Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks: Unlikely to cause eye irritation or injury.

Components:

ORGANIC ACID:

Result: Corrosive to eyes

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

ORGANIC ACID:

Test Type: Buehler Test
 Species: Guinea pig
 Method: OECD Test Guideline 406

Germ cell mutagenicity

Not classified based on available information.

Components:

ORGANIC ACID:

- Genotoxicity in vitro : Test Type: Ames test
 Method: OECD Test Guideline 471
 Result: negative


- Genotoxicity in vivo : Test Type: Mammalian bone marrow sister chromatid exchange
 Species: Rat
 Cell type: Bone marrow
 Method: OECD Test Guideline 475
 Result: negative

Carcinogenicity

Not classified based on available information.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Components:

ORGANIC ACID:

Effects on fertility : Species: Rat
Application Route: Oral
Fertility: NOAEL Mating/Fertility: 400 mg/kg body weight
Symptoms: No effects on fertility No effects on reproduction parameters
Method: OECD Test Guideline 416

Effects on foetal development : Species: Rabbit
Application Route: Oral
Developmental Toxicity: NOAEL F1: 450 mg/kg body weight
Symptoms: No specific developmental abnormalities
Method: OECD Test Guideline 414

STOT - single exposure

Not classified based on available information.

Components:

ORGANIC ACID:

Exposure routes: Inhalation
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:


Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Fathead minnow (Pimephales promelas)): > 1,000 mg/l
Exposure time: 96 h

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Test Type: static test
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
 Exposure time: 48 h
 Test Type: static test
 Method: OECD Test Guideline 202

Toxicity to algae : EC50 (calculated) (Desmodesmus subspicatus): Calculated > 100 mg/l
 End point: EC 50
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on similar product.

Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.
 Chronic aquatic toxicity : Not classified based on available information.

Components:

ORGANIC ACID:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 85 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Daphnia magna)): > 130 mg/l
 Exposure time: 48 h
 Test Type: flow-through test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 20 mg/l
 End point: Biomass
 Exposure time: 72 h
 Test Type: flow-through test
 Method: OECD Test Guideline 201


Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): > 10 mg/l
 Exposure time: 35 d
 Test Type: flow-through test
 Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (Daphnia magna)): 53 mg/l
 Exposure time: 21 d
 Test Type: flow-through test
 Method: OECD Test Guideline 211

Persistence and degradability

Product:

Stability in water : Remarks: Hydrolyses slowly.

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Components:

ORGANIC ACID:

Biodegradability : Inoculum: activated sludge
 Result: Readily biodegradable.
 Biodegradation: 87 %
 Exposure time: 28 d

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 3).

Components:

ORGANIC ACID:

Bioaccumulation : Bioconcentration factor (BCF): 1.0
 Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 0.93

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

IATA-DGR

Not dangerous goods

IMDG-Code

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Not dangerous goods

U.S. DOT - ROAD

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant	no
------------------	----

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
FORMALDEHYDE	50-00-0	100	166666

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
FORMALDEHYDE	50-00-0	100	166666

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards


SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65

Proposition 65 warnings are not required for this product based on the results of a risk assessment.

The components of this product are reported in the following inventories:

- DSL : All components of this product are on the Canadian DSL
- AICS : On the inventory, or in compliance with the inventory
- ENCS : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory

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- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory
- TCSI : On the inventory, or in compliance with the inventory
- TSCA : On TSCA Inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

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Full text of H-Statements

- H227 : Combustible liquid.
- H302 : Harmful if swallowed.
- H311 : Toxic in contact with skin.
- H314 : Causes severe skin burns and eye damage.
- H318 : Causes serious eye damage.
- H335 : May cause respiratory irritation.

Full text of other abbreviations

- Acute Tox. : Acute toxicity
- Eye Dam. : Serious eye damage
- Flam. Liq. : Flammable liquids
- Skin Corr. : Skin corrosion
- STOT SE : Specific target organ toxicity - single exposure

Further information

Other information : The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by the Solenis Environmental Health and Safety Department.


Sources of key data used to compile the Safety Data Sheet

Key literature references and sources of data

SOLENIS Internal data

SOLENIS internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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