



SAFETY DATA SHEET

1. Identification

Product identifier	Deadline Bullets®
Other means of identification	
SDS number	305
Product registration number	
EPA	5481-507 5481-511
Synonyms	Deadline® M-Ps™ * Deadline® T&O * Deadline® M-Ps™ Mini Pellets * Deadline® Ornamental * MolIXide
Recommended use	Molluscide
Recommended restrictions	Keep away from dogs!
EPA Registration number	5481-507, 5481-511
Pest Control Products Act (Canada)	26650
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	
Company name	AMVAC Chemical Corporation
Address	4100 E Washington Blvd Los Angeles, CA 90023 USA
Telephone	AMVAC Chemical Corp 323-264-3910 AMVAC Chemical Corp 323-268-1028 (FAX)
Website	www.Amvac-Chemical.com
E-mail	CustServ@Amvac-Chemical.com
Emergency phone number	Medical 888-681-4261 CHEMTREC® 800-424-9300 (USA+Canada) Product Use 888-462-6822 CHEMTREC® (Outside USA) +1-703-527-3887

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	Not available.
Precautionary statement	
Prevention	Wash hands thoroughly after handling.
Response	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.
Storage	Store away from incompatible materials.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Metaldehyde		108-62-3	4
Other components		Mixture	96

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact

Take off contaminated clothing and wash before reuse. Wash off immediately with plenty of 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

Get medical attention if symptoms occur. Rinse mouth. Drink 1 or 2 glasses of water. Do not induce vomiting without advice from poison control center. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Most important symptoms/effects, acute and delayed

Based on animal toxicity information for Metaldehyde, it is anticipated that this material would be harmful upon ingestion and that direct contact may elicit mild eye and skin irritation. Overexposure to Metaldehyde may cause excessive salivation, vomiting, nausea, acetonuria (odor of acetone on breath), convulsions, increased body temperature, depression of medullary respiratory and vasomotor control centers and coma. May be fatal. [Note: Because of the low amounts of Metaldehyde in the product, it is unlikely the victim can be exposed to sufficient quantities of Metaldehyde to have coma or death induced.] Overexposure may aggravate preexisting conditions associated with the kidney, liver, and brain.

Indication of immediate medical attention and special treatment needed

According to manufacturer of Metaldehyde Technical communication, gastric lavage with a 2.5% solution of sodium bicarbonate - powdered charcoal and prevention of acidosis by sodium bicarbonate may be needed. Administration of Diazepam or Clonidine 20 minutes after ingestion of 1000 mg/kg of Metaldehyde by mice delayed the onset of symptoms and reduced mortality. This is equivalent to 0.6 lb of product ingested for a 10 kg child. Therefore, Diazepam and Clonidine may be appropriate antidotes to reduce the symptomatology of Metaldehyde ingestion. For acute inhalation overexposure, the patient should be monitored as respiratory failure may occur 24 to 48 hours after exposure.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

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 the event of fire, cool tanks with water spray. Water runoff can cause environmental damage.

General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS/SDS.

Methods and materials for containment and cleaning up

Wear appropriate protective equipment and clothing during clean-up. Shovel up, sweep up or vacuum up the material and place in a container for salvage or disposal.

Environmental precautions

Avoid release to the environment.

7. Handling and storage

Precautions for safe handling

Keep out of the reach of children. Keep away from food, drink and animal feedstuffs. Avoid breathing dust. Avoid contact with skin. Avoid contact with eyes. Wear appropriate personal protective equipment recommended in section 8. Wash thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Material	Type	Value
Metaldehyde	TWA	0.5 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Dust exposure limit.

Appropriate engineering controls

General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

Eye/face protection

Not normally needed. If contact is likely, safety glasses with side shields are recommended.

Skin protection

Hand protection

To prevent skin contact use suitable protective gloves.

Other

Wear suitable protective clothing.

Respiratory protection

No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Not applicable.

General hygiene considerations

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

Solid.

Form

Pellets.

Color

Red, blue or buff.

Odor

Aldehyde odor

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

Not available.

Flash point

Not available.

Evaporation rate

Not available.

Flammability (solid, gas)

Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Not available.

Flammability limit - upper (%)

Not available.

Explosive limit - lower (%)

Not available.

Explosive limit - upper (%)

Not available.

Vapor pressure

1.90E+00 mm Hg @ 24°C (active ingredient).

Vapor density

6.06 (air = 1).

Relative density

Not available.

Solubility(ies)	
Solubility (water)	0.2 g/l @ 17°C for active ingredient.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	24 - 45 lb/ft3
Specific gravity	0.4 - 0.72

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	Hazardous polymerization does not occur.
Conditions to avoid	Avoid conditions which create dust. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Acetaldehyde can be formed by decomposition of Metaldehyde. Decomposition by burning may result in carbon monoxide and other toxic fumes and vapors of unknown composition.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Slight skin irritant.
Eye contact	Causes mild eye irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics
Exposed individuals may experience eye tearing, redness, and discomfort. Based on animal toxicity information for Metaldehyde, it is anticipated that this material would be harmful upon ingestion and that direct contact may elicit mild eye and skin irritation. Overexposure to Metaldehyde may cause excessive salivation, vomiting, nausea, acetonuria (odor of acetone on breath), convulsions, increased body temperature, depression of medullary respiratory and vasomotor control centers and coma. May be fatal. [Note: Because of the low amounts of Metaldehyde in the product, it is unlikely the victim can be exposed to sufficient quantities of Metaldehyde to have coma or death induced.]

Information on toxicological effects

Acute toxicity Causes slight skin irritation. Causes mild eye irritation.

Product	Species	Test Results
Metaldehyde		
<u>Acute</u>		
Inhalation		
LC50	Rat	> 2.48 mg/l, 4 hours

Skin corrosion/irritation Causes slight skin irritation.

Serious eye damage/eye irritation Causes mild eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Acetaldehyde, a decomposition product of Metaldehyde, has been listed as carcinogenic in the IARC monographs and by the NTP. Acetaldehyde is present at less than 0.01% in the product. None of the components found in appreciable quantities has been found to be carcinogenic by IARC, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	No evidence of reproductive toxicity has been observed. No evidence of teratogenicity in laboratory animals.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Overexposure may aggravate preexisting conditions associated with the kidney, liver, and brain.

12. Ecological information

Ecotoxicity	This product may be fatal to dogs, other pests, and wild animals if eaten. May be toxic to water inhabitants. Do not contaminate water bodies.
Persistence and degradability	No data is available on the degradability of this product.
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 according to all applicable regulations. Dispose of contents/container in accordance with all applicable 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	Dispose of in accordance with all applicable regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal methods/information).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal according to all applicable regulations. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

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

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is 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.

This chemical 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.

CAUTION! Harmful if swallowed. Avoid breathing dust. May cause eye irritation. Avoid contact with eyes, skin, and clothing. Keep out of reach of children and pets, poultry and livestock. Keep children, dogs and other pets out of treated areas.

ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Metaldehyde (CAS 108-62-3) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories Acute toxicity (any route of exposure)
Reproductive toxicity

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)

Not regulated.

US state regulations

California Proposition 65



WARNING: California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No

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	Apr-08-2015
Revision date	Nov-08-2017
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 #	4.0
HMIS® ratings	Health: 1 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 1 Flammability: 0 Instability: 0
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Revision information	Product and Company Identification: Synonyms Identification: Recommended restrictions Composition / Information on Ingredients: Disclosure Overrides Toxicological information: Acute toxicity Transport information: IMDG classification Transport information: IATA classification Other information, including date of preparation or last revision: Disclaimer