

SAFETY DATA SHEETS

This SDS packet was issued with item:

078467779

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078467787 078706147

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Clostridium Perfringens Type A Toxoid (Bovine)

| | | | |
|---|--|----------------------|--------------------------|
| Section V - Reactivity Data | | | |
| Stability | Unstable | | Conditions to Avoid None |
| | Stable | X | |
| Incompatibility (Materials to Avoid) None | | | |
| Hazardous Decomposition or Byproducts Carbon monoxide or carbon dioxide | | | |
| Hazardous Polymerization | May Occur | | Conditions to Avoid None |
| | Will Not Occur | X | |
| Section VI - Health Hazard Data | | | |
| Route(s) of Entry: | Inhalation? Yes | Skin? Yes | Ingestion? Yes |
| Health Hazards (Acute and Chronic) The product may be irritating in the case of skin or eye contact. | | | |
| | | | |
| | | | |
| Carcinogenicity: | NPT? Yes | IARC Monographs? Yes | OSHA Regulated? Yes |
| Formaldehyde is a suspected human carcinogen. | | | |
| Emergency and First Aid Procedures In case of skin or eye contact, flush with plenty of water. If the product is ingested, wash the mouth out with water and call a physician. In case of accidental injection, wash the puncture site and see a physician immediately. | | | |
| | | | |
| | | | |
| Section VII - Precautions for Safe Handling and Use | | | |
| Steps to Be Taken in Case Material Is Released or Spilled | | | |
| Clean up the spill with absorbent material, and afterwards, wash the site thoroughly with water. | | | |
| Waste Disposal Method | Dispose in accordance with all applicable federal, state, and local environmental regulations. | | |
| Precautions to Be Taken in Handling and Storing | | | |
| Refrigerate the product (2° to 7° C) {35° to 45° F}. Keep the container closed when stored, and shake well before using. | | | |
| Other Precautions | NA | | |
| | | | |
| Section VIII - Control Measures | | | |
| Respiratory Protection (Specify Type) | | | |
| An approved cartridge respirator for large spills | | | |
| Ventilation | Local Exhaust No | Special NA | |
| | Mechanical (General) Yes | Other NA | |
| Protective Gloves | Vinyl or nitrile | | Eye Protection Goggles |
| Other Protective Clothing or Equipment NA | | | |
| Work/Hygienic Practices | | | |
| Take precautions to prevent accidental injections. | | | |

Section IX - Regulatory Information

Component: Formaldehyde

Formaldehyde is subject to SARA (Secs. 312 and 313), CERCLA, and 29 CFR 1910.1048 regulations

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SAFETY DATA SHEET

1. Identification

| | |
|---|--|
| Product identifier | C. perfringens Type A Toxoid - Bovine |
| Other means of identification | |
| Item Code | AV6190 |
| Synonyms | Clostridium Perfringens Type A Toxoid (Bovine) |
| Recommended use | Veterinary Vaccine |
| Recommended restrictions | None known. |
| Manufacturer/Importer/Supplier/Distributor information | |
| Company Name | Elanco Animal Health 2500 Innovation Way Greenfield, IN 46140 US |
| Phone: | 1-877-Elanco1 (1-877-352-6261) |
| Emergency Telephone: | Elanco Product Technical Support / Human or Animal Exposure Reporting: 1-888-545-5973 |
| Email: | elanco_sds@elanco.com |
| Transportation Emergency Telephone: | CHEMTREC: 1-800-424-9300 (Outside U.S. 1-703-527-3887) |

2. Hazard(s) identification

| | |
|--|--|
| Physical hazards | Not classified. |
| Health hazards | Not classified. |
| OSHA defined hazards | Not classified. |
| Label elements | |
| Hazard symbol | None. |
| Signal word | None. |
| Hazard statement | The mixture does not meet the criteria for classification. |
| Precautionary statement | |
| Prevention | Not available. |
| Response | Not available. |
| Storage | Not available. |
| Disposal | Not available. |
| 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 | % |
|---------------|--------------------------|------------|----------|
| FORMALDEHYDE | | 50-00-0 | <= 0.074 |

| | |
|-----------------------------|--|
| Composition comments | Remaining components of this product are non-hazardous and/or are present at concentrations below reportable levels. |
|-----------------------------|--|

4. First-aid measures

| | |
|---------------------|--|
| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Wash off with soap and water. Get medical attention if irritation develops and persists. |
| Eye contact | Rinse with water. Get medical attention if irritation develops and persists. |

| | |
|---|---|
| Ingestion | Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention. |
| Most important symptoms/effects, acute and delayed | None known. |
| General information | If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

5. Fire-fighting measures

| | |
|--|---|
| Suitable extinguishing media | Use fire-extinguishing media appropriate for surrounding materials. |
| Unsuitable extinguishing media | Not available. |
| Specific hazards arising from the chemical | Not applicable. |
| Special protective equipment and precautions for firefighters | Wear suitable protective equipment. |
| General fire hazards | No unusual fire or explosion hazards noted. |

6. Accidental release measures

| | |
|--|--|
| Personal precautions, protective equipment and emergency procedures | Not available. |
| Methods and materials for containment and cleaning up | Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. |
| Environmental precautions | Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

| | |
|---|---|
| Precautions for safe handling | Observe good industrial hygiene practices. |
| Conditions for safe storage, including any incompatibilities | Store in original tightly closed container. |

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

| Components | Type | Value |
|----------------------------|------|----------|
| Formaldehyde (CAS 50-00-0) | STEL | 2 ppm |
| | TWA | 0.75 ppm |

US. ACGIH Threshold Limit Values

| Components | Type | Value |
|----------------------------|---------|---------|
| Formaldehyde (CAS 50-00-0) | Ceiling | 0.3 ppm |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|----------------------------|---------|-----------|
| Formaldehyde (CAS 50-00-0) | Ceiling | 0.1 ppm |
| | TWA | 0.016 ppm |

| | |
|---|--|
| Biological limit values | No biological exposure limits noted for the ingredient(s). |
| Appropriate engineering controls | Ensure adequate ventilation, especially in confined areas. |

Individual protection measures, such as personal protective equipment

| | |
|-------------------------------|---|
| Eye/face protection | Safety glasses. |
| Skin protection | |
| Hand protection | Wear appropriate chemical resistant gloves. |
| Other | Wear suitable protective clothing. |
| Respiratory protection | In case of insufficient ventilation, wear suitable respiratory equipment. |
| Thermal hazards | Not available. |

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 | Liquid. |
| Form | Liquid |
| Color | Not available. |

Odor Not available.

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 Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

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 Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on toxicological effects

Acute toxicity

| Components | Species | Test Results |
|---|---|---|
| FORMALDEHYDE (CAS 50-00-0) | | |
| <u>Acute</u> | | |
| Inhalation | | |
| LC50 | Rat | 10500 mg/m³, 4 hours |
| Oral | | |
| LD50 | Rat | 640 mg/kg |
| Skin corrosion/irritation | Rabbit: Corrosive. (Formaldehyde) Based on available data, the classification criteria are not met. | |
| Serious eye damage/eye irritation | Rabbit: Corrosive. (Formaldehyde) Based on available data, the classification criteria are not met. | |
| Respiratory or skin sensitization | | |
| ACGIH sensitization | | |
| FORMALDEHYDE (CAS 50-00-0) | | Dermal sensitization Respiratory sensitization |
| Respiratory sensitization | Exposure to formaldehyde may cause respiratory sensitization in some individuals or aggravate pre-existing asthmatic conditions. Based on available data, the classification criteria are not met. | |
| Skin sensitization | May cause an allergic skin reaction. (Formaldehyde) Based on available data, the classification criteria are not met. | |
| Germ cell mutagenicity | Result in genetic toxicity assays (in vitro and in vivo): Mixed results (Formaldehyde) Based on available data, the classification criteria are not met. | |
| Carcinogenicity | May cause cancer. (Formaldehyde) Based on available data, the classification criteria are not met. | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | | |
| FORMALDEHYDE (CAS 50-00-0) | | 1 Carcinogenic to humans. |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052) | | |
| FORMALDEHYDE (CAS 50-00-0) | | Cancer |
| US. National Toxicology Program (NTP) Report on Carcinogens | | |
| FORMALDEHYDE (CAS 50-00-0) | | Known To Be Human Carcinogen. |
| Reproductive toxicity | No effects identified in animal studies. (Formaldehyde) Based on available data, the classification criteria are not met. | |
| Specific target organ toxicity - single exposure | May cause respiratory irritation. (Formaldehyde) Based on available data, the classification criteria are not met. | |
| Specific target organ toxicity - repeated exposure | No significant target organ toxicity reported. (Formaldehyde) Based on available data, the classification criteria are not met. | |
| Aspiration hazard | Not available. | |

12. Ecological information

Ecotoxicity

| Components | Species | Test Results |
|--------------------------------------|--|--|
| FORMALDEHYDE (CAS 50-00-0) | | |
| Aquatic | | |
| Acute | | |
| Crustacea | EC50 | Water flea (Daphnia magna) 29 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (Pimephales promelas) 24.1 mg/l, 96 hours |
| Chronic | | |
| Fish | NOEC | Medaka, high-eyes (Oryzias latipes) > 48 mg/l, 28 days |
| Persistence and degradability | No data is available on the degradability of this product. | |
| Bioaccumulative potential | No data available. | |

Partition coefficient n-octanol / water (log Kow)

FORMALDEHYDE

0.35

Mobility in soil

No data available.

Other adverse effects

Not available.

13. Disposal considerations**Disposal instructions**

Dispose of contents/container in accordance with local/regional/national/international regulations.

14. Transport information**DOT**

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

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 not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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)

FORMALDEHYDE (CAS 50-00-0)

Listed.

SARA 304 Emergency release notification

FORMALDEHYDE (CAS 50-00-0)

100 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

FORMALDEHYDE (CAS 50-00-0)

Cancer
Skin sensitization
Respiratory sensitization
Eye irritation
Skin irritation
respiratory tract irritation
Acute toxicity
Flammability

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 313 (TRI reporting)**

Not regulated.

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

FORMALDEHYDE (CAS 50-00-0)

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

FORMALDEHYDE (CAS 50-00-0)

US state regulations

WARNING: This product contains a chemical known to the State of California to cause cancer.

California Proposition 65**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

FORMALDEHYDE (CAS 50-00-0)

Listed: January 1, 1988

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

FORMALDEHYDE (CAS 50-00-0)

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 |
| 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 03-20-2017

Revision date 02-06-2019

Version # 02

List of abbreviations TWA: Time Weighted Average

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