

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

078823156

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

078823149



## MATERIAL SAFETY DATA SHEET

<b>1</b>	<b>PRODUCT AND COMPANY IDENTIFICATION</b>
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**Product Name:** Express® FP5-VL5  
**Product No. :** Not applicable  
**MSDS ID# :** Not applicable  
**GHS Product Identifier:** Not applicable

**Synonyms:**

Molecular Formula: Mixture, not applicable  
Molecular Weight: Not applicable  
CAS Number: Mixture, not applicable  
Chemical Family: Vaccine

**Manufacturer:**

Boehringer Ingelheim Vetmedica, Inc.  
2621 North Belt Hwy  
St. Joseph, MO 64506-2002

**Transportation Emergency:** For Chemical  
Emergency Spill, Leak, Fire, Exposure, or  
Accident Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300  
Outside USA and Canada: +1 703-527-3887  
(collect calls accepted)

**Medical Emergency (24HR):** (866) 638-2226

**Non-Emergency Telephone:** (800) 821-7467

**Intended Use:** For vaccination of healthy cows and replacement heifers prior to breeding for prevention of persistently infected calves caused by Bovine Virus Diarrhea Types 1 and 2, and for prevention of urinary shedding of *L. borgpetersenii* serovar *hardjo* (type *hardjo-bovis*). Vaccinated animals subsequently exposed to *L. borgpetersenii* serovar *hardjo* (type *hardjo-bovis*) have been shown to clear renal infections within 8 weeks of exposure.

**For vaccination of healthy, susceptible cattle as an aid in prevention of respiratory disease caused by Infectious Bovine Rhinotracheitis (IBR) virus, Bovine Virus Diarrhea (BVD) Types 1 and 2, Bovine Respiratory Syncytial Virus (BRSV), and as an aid in reduction of respiratory disease caused by Parainfluenza 3 (PI3) virus; as an aid in reduction of infertility, delayed conception, or abortion caused by *Campylobacter fetus* var. *venerealis*, and leptospirosis caused by 5 serovars of *Leptospira* (*L. canicola*, *L. grippityphosa*, *L. hardjo*, *L. icterohaemorrhagiae*, and *L. pomona*).**

## 2 HAZARDS IDENTIFICATION

### Emergency Overview

**Physical State:** Modified live viruses supplied in a glass vial and a solution of inactivated bacterin is supplied in a high density plastic bottle.

**Color:** White to light brown opaque

**Odor:** No data available



### **WARNING!**

**For use in cattle only.**

**Not for human use.**

**Allergic reactions can occur.**

### **Precautionary Statements:**

Accidental human injection can cause serious local reactions or anaphylactic reaction and systemic effects.

Keep only in original container.

Keep at a temperature between 2 - 7°C.

Do not freeze.

Store out of direct sunlight.

Fire-fighting: Use foam, carbon dioxide, dry powder and water fog or material appropriate for surrounding fire.

Avoid contact with eyes, skin and clothing.

Wash thoroughly with soap and water after handling.

Wear suitable gloves and eye/face protection.

Spills: Cover with absorbent or contain. Collect and incinerate.

In case of accident/exposure or if you feel unwell, seek medical advice immediately (show the label where possible).

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

If swallowed, seek medical advice immediately and show this container or label.

In case of contact with eyes, flush with gently flowing fresh water thoroughly.

Wash skin thoroughly with soap and water after handling.

This material and its container must be disposed of in a safe way.

Keep out of reach of children.

Keep away from food, drink, and animal feedstuffs.

### **Potential Health Effects**

**Inhalation:** Not expected to be an inhalation hazard with prescribed use.

**Eye Contact:** Not expected to be a hazard to the eye with prescribed use. Exposure to liquid in eye may cause mild transient eye irritation.

**Skin Contact:** Not expected to be a hazard to the skin. Can cause hypersensitive reactions. May cause skin sensitization by contact.

**Ingestion:** Not expected to be an ingestion hazard with prescribed use. Ingestion may cause nausea and systemic effects.

**Injection:** Swelling at injection site may occur.

**Chronic Health Effects:** Possible hypersensitization (development of abnormal sensitivity).

**Target Organ(s):** Gastrointestinal System, Reproductive System, Respiratory System, Skin

**OSHA Regulatory Status:** Nonhazardous, exempt

**Environment:** No data available

## **3 COMPOSITION / INFORMATION ON INGREDIENTS**

<b>Chemical Name</b>	<b>EC No.</b>	<b>CAS- No.</b>	<b>Concentration</b>	<b>Classification</b>	<b>Notes</b>
Bovine Rhinotracheitis-Virus Diarrhea-Parainfluenza-3- Respiratory Syncytial Virus (modified live virus)	----	----	proprietary	----	---

<i>Campylobacter Fetus- Leptospira Canicola-L. Grippotyphosa-L. Hardjo- L. Icterohaemorrhagiae-L. Pomona Bacterin (inactivated)</i>	----	----	proprietary	----	---
Neomycin sulfate	215-773-1	1405-10-3	proprietary	----	*
Neomycin	215-766-3	1404-04-2	proprietary	----	*
Formaldehyde	2000018	50-00-0	≤ 0.74 g/L	T; C; C3 R23/24/25/ R34 R40 R43	*

The full texts for all R-Phrases are displayed in Section 16, if applicable.

\* Used to inactivate virus and subsequently removed from solution. Concentration represents maximum remaining amount by percent weight which is below USDA allowable limits.

#### 4 FIRST AID MEASURES

**General: Animals or persons developing anaphylactic (life-threatening) reactions, such as difficulty in breathing or unconsciousness, must receive immediate medical attention.**

**Inhalation:** Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

**Eye Contact:** Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation or rash occurs, seek medical advice. Wash contaminated clothing before reuse.

**Ingestion:** Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

**Injection:** In case of accidental injection, wash the site thoroughly. Contact a physician immediately.

**Note to Physician:** For animal injection only. Not for human use.

#### 5 FIRE-FIGHTING MEASURES

**Extinguishing Media:** Extinguish with foam, carbon dioxide, dry powder and water fog or material appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** None known

**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing.

**Unusual Fire & Explosion Hazards:** None known

**Hazardous Combustion Products:** Carbon monoxide, carbon dioxide

## 6 ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Wear appropriate personal protective equipment (See Section 8).

**Spill Cleanup Methods:** STEPS TO BE TAKEN IF SIGNIFICANT QUANTITIES OF PRODUCT IS SPILLED: Absorb or cover with dry earth, sand or other non-combustible material. Place spillage in appropriate container for waste disposal. Wash contaminated clothing before use.

**Environmental Precautions:** Prevent runoff from entering drains, sewers or streams. Dike for later disposal.

## 7 HANDLING AND STORAGE

**Handling:** HANDLING SIGNIFICANT QUANTITIES OF PRODUCT: Avoid contact with eyes, skin or clothing. Avoid accidental injection. Wash hand thoroughly after handling.

**Storage:** Store at 2°-7° C (35°-45° F). Do not freeze. Store out of direct sunlight to protect product integrity. Shake well before using.

## 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

**For Industrial Exposures:**

**Exposure Limits:**

Chemical Name	Source	Type	Exposure Limits	Notes
Formaldehyde	ACGIH	Ceiling Exposure Limit	0.3 ppm	Sensitizer, Suspected cancer hazard, Upper respiratory and eye irritation
Formaldehyde	OSHA	Action Level	0.5 ppm	Cancer-suspect agent
Formaldehyde	OSHA	TWA	0.75 ppm	----
Formaldehyde	OSHA	STEL	2 ppm	----

Where lower governmentally imposed exposure limits exist, such limits should take precedence.

**Engineering Controls:** Not generally required when handling vials or containers. Good ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Respiratory Protection:** Not generally required when handling vials or containers. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if

respirators are used, a program should be instituted to assure compliance with OSHA standard 63 FR 1152, January 8, 1998. Respirator type: NIOSH approved organic vapor respirator.

**Europe: Wear appropriate personal protective equipment according to the Council Directive 89/686/EEC (4) and the appropriate CEN standards.**

**PERSONAL PROTECTIVE EQUIPMENT:** Not generally required when handling containers. If containers are compromised or exposure to the active ingredient or mixture is likely wear:

**Eye Protection:** Wear safety glasses with side shields (or goggles).

**Hand Protection:** Wear suitable gloves.

**Skin Protection:** Wear protective clothing appropriate for the risk of exposure.

**Hygiene Measures:** Eye bath, washing facilities

## 9 PHYSICAL AND CHEMICAL PROPERTIES

**Color:** White to light brown opaque

**Odor:** No data available

**Odor Threshold:** No data available

**Physical State:** Modified live viruses supplied in a glass vial and a solution of inactivated bacterin is supplied in a high density plastic bottle.

**pH:** No data available

**Melting Point:** No data available

**Freezing Point:** No data available

**Boiling Point:** No data available

**Flash Point:** No data available

**Flammability Limit – Upper (%):** No data available

**Flammability Limit – Lower (%):** No data available

**Evaporation rate:** No data available

**Vapor Pressure:** No data available

**Vapor Density (Air=1):** No data available

**Specific Gravity:** No data available

**Solubility:** No data available

**Partition Coefficient (n-Octanol/water):** No data available

**Autoignition Temperature:** Not applicable

**Decomposition Temperature:** No data available

## 10 STABILITY AND REACTIVITY

**Stability:** Stable

**Conditions to Avoid:** Temperatures below 2° C (35° F), direct sunlight

**Incompatible Materials:** Strong oxidizing agents

**Hazardous Decomposition Products:** None known

**Possibility of Hazardous Reactions:** Will not occur.

<b>11</b>	<b>TOXICOLOGICAL INFORMATION</b>
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Express® FP5-VL5 is considered non-toxic.

**Listed Carcinogens:** None

<b>12</b>	<b>ECOLOGICAL INFORMATION</b>
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**Ecotoxicity:** No data available

**Persistence and degradability:** No data available

**Mobility in soil:** No data available

**Other adverse effects:** No data available

**Germany WGK:** Not applicable

<b>13</b>	<b>DISPOSAL CONSIDERATIONS</b>
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**General Information:** Dispose of in accordance with local, state, federal, national or international regulations.

**Disposal Methods:** No specific disposal method required. Do not empty into drains. Dispose of this material and its container in a safe way. Do not contaminate water, food, or feed by disposal.

**RCRA Information:** Not applicable

<b>14</b>	<b>TRANSPORT INFORMATION</b>
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**DOT:** Not regulated

**TDG:** Not regulated

**ADR/RID:** Not regulated

**IATA:** Not regulated

**IMDG:** Not regulated

<b>15</b>	<b>REGULATORY INFORMATION</b>
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**Canadian Controlled Products Regulations:** This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

**WHMIS Classification:** Noncontrolled

**Inventory Status**



This material is **not** listed on the following inventories: TSCA, DSL, AICS, EINECS, IECSC, ENCS, PICCS, KECI, and NZIoC. Therefore, it can only be used for TSCA exempt purposes such as R&D or veterinary use.

**Canada CEPA Schedule 1 - Formaldehyde**

**US Regulations**

**CERCLA Hazardous Substance List (40 CFR 302.4):** None listed.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):** None listed.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):** None listed.

**SARA Title III**

**Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):** None listed.

**Section 311/312 (40 CFR 370):** Not Regulated.

**Section 313 Toxic Release Inventory (40 CFR 372):** None listed.

**State Regulations**

**California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):**

Formaldehyde (gas)

**Massachusetts Right-To-Know List:** Formaldehyde

**Minnesota Hazardous Substances List:** None listed.

**New Jersey Right-To-Know List:** None listed.

**Pennsylvania Right-To-Know List:** Formaldehyde

**Rhode Island Right-To-Know List:** Formaldehyde

**European Regulations**

**Austria MAK List (Annex I):** Formaldehyde

**Denmark (Annex 3.6):** Formaldehyde

**Germany (Dangerous Substances Ordinance 2004, Annex III):** None listed.

**Norway (List of Dangerous Substance):** None listed.

**Sweden (Annex 3):** Formaldehyde

**Switzerland (Toxins List 1):** Formaldehyde

<b>16</b>	<b>OTHER INFORMATION</b>
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**Hazard Ratings**

	<b>Health Hazard</b>	<b>Fire Hazard</b>	<b>Reactivity Hazard</b>
<b>HMIS</b>	1	0	0

	<b>Health Hazard</b>	<b>Fire Hazard</b>	<b>Reactivity Hazard</b>	<b>Special Hazard</b>
<b>NFPA</b>	1	0	0	N/A

\*- Chronic health effect; 0 – Minimal; 1 – Slight; 2 – Moderate; 3 – Serious; 4 – Severe

**EU Symbol and R Phrase Definitions**

T – Toxic

C – Corrosive

C3 – Carcinogen category 3

R23/24/25 – Toxic by inhalation, in contact with skin and if swallowed.

R34 – Causes burns.

R40 – Limited evidence of a carcinogenic effect.

R43 – May cause sensitization by skin contact.

#### **ABBREVIATIONS:**

BIV - Boehringer Ingelheim Vetmedica, Inc.

N/A - Not applicable

N/E - Not established

pph - parts per hour

#### **References:**

1. Express® FP5-VL5 Label
2. Ariel WebInsight Regulatory Database. Regulatory Summary for North America, Western Europe, and Global Inventories Database.
3. GHS Manual

#### **Revision Information:** New MSDS

**Prepared by:** Boehringer Ingelheim Vetmedica, Inc.

**Issue Date:** 08/26/2010

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# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Express FP5-VL5

**Other means of identification**

**Product code** APHIS Code(s) - 44C9.20; 44C9.21, Family Code 264

**Recommended use** For vaccination of healthy cattle.

**Recommended restrictions** None known.

### Manufacturer/Importer/Supplier/Distributor information

**Company name** Boehringer Ingelheim Vetmedica, Inc.

**Address** 2820 North Normandy Drive  
Petersburg, VA 23805  
US

**Telephone** Telephone number: (804) 504-8600

**E-mail** Not available.

**Emergency phone number** CHEMTREC - 24 HOURS: 1-800-424-9300

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Sensitization, respiratory Category 1  
Sensitization, skin Category 1  
Carcinogenicity Category 1A

**OSHA defined hazards** Not classified.

### Label elements



**Signal word** Danger

**Hazard statement** May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer.

### Precautionary statement

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist or vapor. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.

**Response** If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. If experiencing respiratory symptoms: Call a poison center/doctor. Wash contaminated clothing before reuse.

**Storage** 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** None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Bovine Rhinotracheitis-Virus Diarrhea-Parainfluenza-3-Respiratory Syncytial Virus (modified live virus)	NA	Proprietary
Campylobacter Fetus-Leptospira Canicola-L. Grippotyphosa-L. Hardjo-L. Icterohaemorrhagiae-L. Pomona Bacterin (inactivated)	NA	Proprietary
Formaldehyde*	50-00-0	≤ 0.74 g/L
Neomycin sulfate*	1405-10-3	Proprietary
Neomycin*	1404-04-2	Proprietary

**Composition comments** All concentrations are in percent by weight.

\* Used to inactivate virus and subsequently removed from solution. Concentration represents maximum remaining amount by percent weight which is below USDA allowable limits.

#### 4. First-aid measures

##### Inhalation

If breathing is difficult, remove 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. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

##### Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

##### Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

##### Ingestion

Rinse mouth. Get medical attention if symptoms occur.

##### Most important symptoms/effects, acute and delayed

Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash.

##### 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. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

#### 5. Fire-fighting measures

##### Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

##### 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

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

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. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

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. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage****Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. 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 original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Store away from foodstuffs. Store in the dark at 2°C to 7°C (35°F to 45°F). Avoid freezing. Shake Well. Protect from direct sunlight.

**8. Exposure controls/personal protection****Occupational exposure limits****US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

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)	STEL	0.3 ppm
	TWA	0.1 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**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate.

**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.

**Skin protection**

**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** Wear appropriate thermal protective clothing, when necessary.

**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. Contaminated work clothing should not be allowed out of the workplace.

**9. Physical and chemical properties****Appearance**

<b>Physical state</b>	Liquid.
<b>Form</b>	Modified live viruses supplied in a glass vial and a solution of inactivated bacterin is supplied in a high density plastic bottle.
<b>Color</b>	White to light-brown.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation may be harmful.
<b>Skin contact</b>	May cause an allergic skin reaction.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash.

### Information on toxicological effects

**Acute toxicity** This product is considered nontoxic.

Components	Species	Test Results
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Bovine Rhinotracheitis-Virus Diarrhea-Parainfluenza-3-Respiratory Syncytial Virus (modified live virus) (CAS NA)

**Acute**

**Oral**

LD50 Rat > 89800 mg/kg

Formaldehyde\* (CAS 50-00-0)

**Acute**

**Dermal**

LD50 Rat 270 mg/kg

**Inhalation**

LC50 Rat 0.578 mg/l, 4 hours

**Oral**

LD50 Rat 100 mg/kg

Neomycin sulfate\* (CAS 1405-10-3)

NOEL Rat 12.5 mg/kg bw/day

**Acute**

**Oral**

LD50 Mouse 2250 mg/kg

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

**Respiratory or skin sensitization**

**ACGIH sensitization**

FORMALDEHYDE (CAS 50-00-0) Dermal sensitization  
Respiratory sensitization

**Respiratory sensitization** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin sensitization** May cause an allergic skin reaction.

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

**Carcinogenicity** May cause cancer.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Formaldehyde\* (CAS 50-00-0) 1 Carcinogenic to humans.

**NTP Report on Carcinogens**

Formaldehyde\* (CAS 50-00-0) Known To Be Human Carcinogen.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Formaldehyde\* (CAS 50-00-0) Cancer

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

**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.

Components	Species	Test Results
Formaldehyde* (CAS 50-00-0)		
<b>Aquatic</b>		
Crustacea	EC50 Water flea (Daphnia pulex)	4.3 - 7.8 mg/l, 48 hours
Fish	LC50 Striped bass (Morone saxatilis)	10.302 - 16.743 mg/l, 96 hours

<b>Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.
<b>Bioaccumulative potential</b>	No data available.
<b>Partition coefficient n-octanol / water (log Kow)</b>	
Formaldehyde* (CAS 50-00-0)	0.35
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	This product contains one or more substances identified as hazardous air pollutants (HAPs) per the US Federal Clean Air Act (see section 15).

### 13. Disposal considerations

<b>Disposal instructions</b>	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.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local 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 instructions).
<b>Contaminated packaging</b>	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.

#### 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.  
One or more components are not listed on TSCA.  
Therefore, it can only be used for TSCA exempt purposes such as R&D or veterinary use.  
FEDERAL LAW RESTRICTS THIS DRUG TO USE BY OR ON ORDER OF LICENSED VETERINARIANS.

#### 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 1910.1001-1053)

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 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
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Formaldehyde*	50-00-0	100	500		
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**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Respiratory or skin sensitization  
Carcinogenicity

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Formaldehyde*	50-00-0	≤ 0.74 g/L

**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)

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations****US. Massachusetts RTK - Substance List**

Formaldehyde\* (CAS 50-00-0)

**US. New Jersey Worker and Community Right-to-Know Act**

Formaldehyde\* (CAS 50-00-0)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Formaldehyde\* (CAS 50-00-0)

**US. Rhode Island RTK**

Formaldehyde\* (CAS 50-00-0)

**California Proposition 65**

**WARNING:** This product can expose you to Formaldehyde\*, which is known to the State of California to cause cancer, and Neomycin sulfate\*, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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

Formaldehyde\* (CAS 50-00-0) Listed: January 1, 1988

**California Proposition 65 - CRT: Listed date/Developmental toxin**

Neomycin sulfate\* (CAS 1405-10-3) Listed: October 1, 1992

**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)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No

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

\*A "Yes" indicates this product complies 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

<b>Issue date</b>	30-October-2017
<b>Revision date</b>	12-February-2018
<b>Version #</b>	02
<b>Further information</b>	HMIS® is a registered trade and service mark of the American Coatings Association (ACA).
<b>HMIS® ratings</b>	Health: 2* Flammability: 0 Physical hazard: 0
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