

## **SAFETY DATA SHEETS**

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

078431681

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

078377493

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

078431699 078431707

# 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
Bovine Rhinotracheitis-Virus Diarrhea-Parainfluenza-3-Respiratory Syncytial Virus (modified live virus) (CAS NA)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	> 89800 mg/kg
Formaldehyde* (CAS 50-00-0)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rat	270 mg/kg
<b>Inhalation</b>		
LC50	Rat	0.578 mg/l, 4 hours
<b>Oral</b>		
LD50	Rat	100 mg/kg
Neomycin sulfate* (CAS 1405-10-3)		
NOEL	Rat	12.5 mg/kg bw/day
<b>Acute</b>		
<b>Oral</b>		
LD50	Mouse	2250 mg/kg
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.	
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.	
<b>Respiratory or skin sensitization</b>		
<b>ACGIH sensitization</b>		
FORMALDEHYDE (CAS 50-00-0)	Dermal sensitization Respiratory sensitization	
<b>Respiratory sensitization</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
<b>Skin sensitization</b>	May cause an allergic skin reaction.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	May cause cancer.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Formaldehyde* (CAS 50-00-0)	1 Carcinogenic to humans.	
<b>NTP Report on Carcinogens</b>		
Formaldehyde* (CAS 50-00-0)	Known To Be Human Carcinogen.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)</b>		
Formaldehyde* (CAS 50-00-0)	Cancer	
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.	
<b>Aspiration hazard</b>	Not an aspiration hazard.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.	

## 12. Ecological information

<b>Ecotoxicity</b>	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.		
<b>Components</b>	<b>Species</b>		<b>Test Results</b>
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**

<b>Classified hazard categories</b>	Respiratory or skin sensitization Carcinogenicity
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**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
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**California Proposition 65 - CRT: Listed date/Developmental toxin**

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