

**Citadel® VL5, suspension for injection**

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**SECTION 1. IDENTIFICATION**

Product name : Citadel® VL5, suspension for injection

Synonyms : Citadel® VL5 HB; Express® FP 5-VL5 diluent; Express® FP 5-VL5 HB diluent; Express® FP 3-VL5 diluent; Express® FP 3-VL5 HB diluent; Campylobacter Fetus-Leptospira Canicola-Grippytyphosa-Hardjo-Icterohaemorrhagiae-Pomona Bacterin. USDA Code 2863.01  
with: Campylobacter fetus-Leptospira canicola-grippytyphosa-hardjo-icterohaemorrhagiae-pomona antigen (inactivated)

**Manufacturer or supplier's details**

Company name of supplier : Boehringer Ing. Pharma GmbH & Co.KG

Address : Binger Straße 173  
Ingelheim 55216  
Germany

Telephone : +498007790900

Prepared by : EHS-Services@Boehringer-Ingelheim.com

Emergency telephone number : Int. Emergency Telephone number: +1 703-527-3887  
German Emergency Telephone number: +49800 1817059

**Recommended use of the chemical and restrictions on use**

Recommended use : Veterinary product

Restrictions on use : Safety Data Sheet only for the professional user., For veterinary use only, Refer to the product insert for complete instructions on usage

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**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Not a hazardous substance or mixture.

**GHS label elements**

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required

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**Other hazards**

This drug is not subject to the labelling requirements under the Globally Harmonized System (GHS)

The pharmacological effect of the medicament has to be considered (see package leaflet).

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Chemical nature : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
Sulfuric acid, aluminium potassium salt	7784-24-9	>= 1 - < 5

Actual concentration is withheld as a trade secret

**SECTION 4. FIRST AID MEASURES**

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
(show the package insert where possible).  
First Aid responders should pay attention to self-protection and use the recommended protective clothing  
Remove from exposure, lie down.  
Take off immediately all contaminated clothing.  
Victim to lie down in the recovery position, cover and keep him warm.
- If inhaled : Move to fresh air.
- In case of skin contact : Wash off immediately with plenty of water.
- In case of eye contact : Rinse immediately with plenty of water for at least 15 minutes.  
Keep eye wide open while rinsing.
- If swallowed : Rinse mouth.  
Drink plenty of water.
- Most important symptoms and effects, both acute and delayed : No information available.
- Notes to physician : Observe the summary of product characteristics of proprietary medicinal products  
Treat symptomatically.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water  
Dry chemical

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Foam  
Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media : None known.

Specific hazards during fire-fighting : In case of fire and/or explosion do not breathe fumes. Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered.

Hazardous combustion products : Carbon oxides

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Complete suit protecting against chemicals

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Wear personal protective equipment. Ensure adequate ventilation. High risk of slipping due to leakage/spillage of product.

Environmental precautions : Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up : Pick up and transfer to properly labelled containers. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Clean with disinfectants.

**SECTION 7. HANDLING AND STORAGE**

Advice on protection against fire and explosion : No special protective measures against fire required. The product is not flammable.

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.

Conditions for safe storage : Refer to the product insert for instructions on storage.

Materials to avoid : Keep away from food, drink and animal feedingstuffs. Observe joint storage prohibition.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of	Control parameters / Permissible	Basis
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		exposure)	concentration	
Sulfuric acid, aluminium potassium salt	7784-24-9	TWA	2 mg/m <sup>3</sup> (Aluminium)	OSHA P0

**Engineering measures** : Local exhaust  
Emergency sprinkling nozzle

**Personal protective equipment**

**Respiratory protection** : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

**Hand protection**

**Material** : Nitrile rubber

**Remarks** : The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.

**Eye protection** : Safety glasses with side-shields  
(Not necessary when using full face mask)

**Skin and body protection** : Laboratory: laboratory coat; Factory: disposable Overall.

**Protective measures** : Handle in accordance with good industrial hygiene and safety practice.  
Avoid contact with skin, eyes and clothing.  
Only use protective equipment in accordance with national/international regulations. Follow the national regulations about wearing personal protective equipment and the warranty given by the manufacturer for the safe function.

**Hygiene measures** : General industrial hygiene practice.  
Wash hands and face before breaks and immediately after handling the product.  
Keep working clothes separately.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** : suspension

**Colour** : tan, light brown, opaque

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Odour : No data available

pH : 6.5 - 7.0

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : No data available

Flammability (solid, gas) : Not applicable

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : No data available

Bulk density : Not applicable

Solubility(ies)  
Water solubility : No data available

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

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
Viscosity, dynamic : No data available  
Viscosity, kinematic : No data available

Explosive properties : Not tested

Oxidizing properties : No data available

Particle size : Not applicable

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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available
Hazardous decomposition products	:	No data available

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**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity**

Not classified based on available information.

**Skin corrosion/irritation**

Not classified based on available information.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Respiratory or skin sensitisation****Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**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 on OSHA's list of regulated carcinogens.

**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.

**STOT - single exposure**

Not classified based on available information.

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**STOT - repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity**

No data available

**Persistence and degradability****Components:****Sulfuric acid, aluminium potassium salt:**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

**Bioaccumulative potential****Components:****Sulfuric acid, aluminium potassium salt:**

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

**Mobility in soil**

No data available

**Other adverse effects****Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Packs that cannot be cleaned should be disposed of in the same manner as the contents.  
Uncontaminated packaging can be recycled.

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**SECTION 14. TRANSPORT INFORMATION****International Regulations****IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations****49 CFR**

Not regulated as a dangerous good

**Special precautions for user**

Not applicable

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**SECTION 15. REGULATORY INFORMATION****CERCLA Reportable Quantity**

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

**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.**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

formaldehyde	50-00-0	>= 0 - < 0.1 %
sodium hydrogensulfite	7631-90-5	>= 0 - < 0.1 %



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disodium hydrogenortho-phosphate	7558-79-4	>= 0 - < 0.1 %
Iron(II)sulphate (1:1), heptahydrate	7782-63-0	>= 0 - < 0.1 %
Copper(II) sulfate, pentahydrate (1:1:5)	7758-99-8	>= 0 - < 0.1 %
Zinc sulfate, heptahydrate (1:1:7)	7446-20-0	>= 0 - < 0.1 %
ammonium chloride	12125-02-9	>= 0 - < 0.1 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

formaldehyde	50-00-0	>= 0 - < 0.1 %
sodium hydrogensulfite	7631-90-5	>= 0 - < 0.1 %
disodium hydrogenortho-phosphate	7558-79-4	>= 0 - < 0.1 %
Iron(II)sulphate (1:1), heptahydrate	7782-63-0	>= 0 - < 0.1 %
Copper(II) sulfate, pentahydrate (1:1:5)	7758-99-8	>= 0 - < 0.1 %
Zinc sulfate, heptahydrate (1:1:7)	7446-20-0	>= 0 - < 0.1 %
ammonium chloride	12125-02-9	>= 0 - < 0.1 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

**US State Regulations****Massachusetts Right To Know**

formaldehyde	50-00-0
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**Pennsylvania Right To Know**

water	7732-18-5
Sulfuric acid, aluminium potassium salt	7784-24-9
formaldehyde	50-00-0
sodium hydrogensulfite	7631-90-5
thiomersal	54-64-8
disodium hydrogenorthophosphate	7558-79-4

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

cyanocobalamine	68-19-9
thiomersal	54-64-8
formaldehyde	50-00-0

**Washington Chemicals of High Concern**

cyanocobalamine	68-19-9
thiomersal	54-64-8
formaldehyde	50-00-0

**California Prop. 65**

WARNING: This product can expose you to chemicals including formaldehyde, which is/are known to the State of California to cause cancer, and thiomersal, Neomycin, sulfate (salt), which is/are 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).

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**California List of Hazardous Substances**

Sulfuric acid, aluminium potassium salt      7784-24-9

**California Permissible Exposure Limits for Chemical Contaminants**

Sulfuric acid, aluminium potassium salt      7784-24-9

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

- TCSI : On the inventory, or in compliance with the inventory
- TSCA : Product contains substance(s) not listed on TSCA inventory.
- AICC : Not in compliance with the inventory
- DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.
- Peptones, beef
- Ethylenediaminetetraacetic acid tetrasodium salt
- ENCS : Not in compliance with the inventory
- ISHL : Not in compliance with the inventory
- KECI : Not in compliance with the inventory
- PICCS : Not in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory
- NZIoC : On the inventory, or in compliance with the inventory
- TECI : Not in compliance with the inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

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

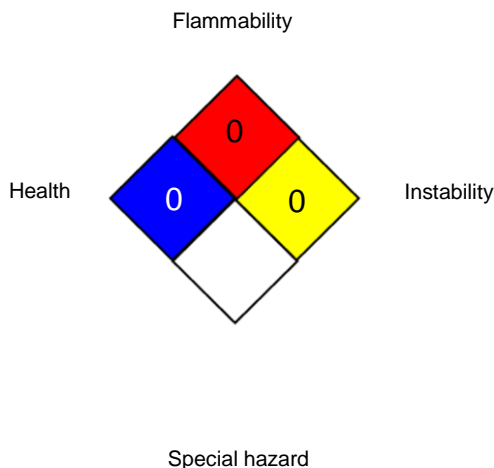
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**SECTION 16. OTHER INFORMATION****Further information**

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## NFPA 704:



## HMIS® IV:

<b>HEALTH</b>	/	0
<b>FLAMMABILITY</b>		0
<b>PHYSICAL HAZARD</b>		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

## Full text of other abbreviations

OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)  
OSHA P0 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; 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 Sub-

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stance Inventory; TECI - Thailand Existing Chemicals 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

Sources of key data used to compile the Safety Data Sheet : The specifications are based on own tests and/or literature data.

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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