SAFETY DATA SHEETS

This SDS packet was issued with item:

078908970

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

078560714 078560722

SAFETY DATA SHEET

1. Identification

Product identifier ReproSTAR L5 HB

Other means of identification

Item Code AV6280

Veterinary Vaccine Recommended use **Recommended restrictions** None known.

Manufacturer/Importer/Supplier/Distributor information Elanco Animal Health **Company Name** 2500 Innovation Way

US

Phone: 1-877-Elanco1 (1-877-352-6261)

Elanco Product Technical Support / Human or Animal Exposure Reporting: **Emergency Telephone:**

(Outside U.S. 1-703-527-3887)

1-888-545-5973

Greenfield, IN 46140

Email: elanco_sds@elanco.com CHEMTREC: 1-800-424-9300 **Transportation Emergency**

2. Hazard(s) identification

Physical hazards Not classified. Aspiration hazard **Health hazards**

OSHA defined hazards Not classified.

Label elements

Telephone:

Signal word Danger

Hazard statement

May be fatal if swallowed and enters airways. H304

Precautionary statement

Not available. Prevention

Response

IF SWALLOWED: Immediately call a POISON CENTER/doctor. P301 + P310

P331 Do NOT induce vomiting.

Storage

Store locked up. P405

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations. P501

Category 1

Hazard(s) not otherwise Accidental injection may cause local swelling, irritation or necrosis at the injection site. Get

classified (HNOC) medical attention immediately. See also section 4.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Mineral Oil Adjuvant SO 3-003		Mixture	20

Material name: ReproSTAR L5 HB SDS US

Chemical name	Common name and synonyms	CAS number	%
Formaldehyde		50-00-0	<= 0.074
Thimerosal		54-64-8	<= 0.01
Composition comments	* Mineral Oil Adjuvant contains up to 92% Ligl Remaining components of this product are no below reportable levels.		
4. First-aid measures			
Inhalation	Move to fresh air. Call a physician if symptom	s develop or persist.	
Skin contact	Wash off with soap and water. Get medical at	tention if irritation develops ar	nd persists.
Eye contact	Rinse with water. Get medical attention if irrita	ation 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	Aspiration may cause pulmonary edema and pneumonitis. Accidental injection may cause local swelling, irritation or necrosis at the injection site.		
Indication of immediate medical attention and special	In case of accidental self-injection of oil emuls	sion vaccines, get medical atte	ention immediately.
treatment needed	SEEK IMMEDIATE MEDICAL TREATMENT at nearest Hospital Emergency Room even if only a very small amount is injected, as failure to treat may result in the mineral oil adjuvant causing sterile abscess and/or loss of affected finger or thumb. If pain persists for more than 12 hours after medical examination, seek additional medical advice.		
	To the Doctor: This product contains mineral of even in small quantities, can cause intense sy necrosis and the loss of a digit. Expert PROM necessitate early incision and irrigation of the of finger pulp or tendon.	velling which may, for exampl PT, surgical attention is requi	e, result in ischaemic red and may
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 s	urrounding 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 meas	sures		
Personal precautions, protective equipment and emergency procedures	Not available.		
Methods and materials for	Prevent entry into waterways, sewer, baseme	nts or confined areas.	
containment and cleaning up	Wipe up with absorbent material (e.g. cloth, flocontamination.	eece). Clean surface thorougl	nly to remove residual
	Never return spills to original containers for re	-use.	
Environmental precautions	Avoid discharge into drains, water courses or		

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

7. Handling and storage Precautions for safe handling Use a needle guard to help prevent self-injection. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container.

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8. Exposure controls/personal protection

Occupational exposure limits

HC OCUA Considerably Doculated Cubatanasa	/20 CED 4040 4004 4050	٠.
US. OSHA Specifically Regulated Substances	(29 CFR 1910.1001-1050	"

Components	туре	value
Formaldehyde (CAS 50-00-0)	STEL	2 ppm

TWA

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form	
Light Mineral Oil (CAS	PEL	5 mg/m3	Mist.	

0.75 ppm

8042-47-5)

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Туре	Value	
Thimerosal (CAS 54-64-8)	Ceiling	0.04 mg/m3	
	TWA	0.01 mg/m3	

US. ACGIH Threshold Limit Values

Components	Туре	Value	Form
Formaldehyde (CAS 50-00-0)	Ceiling	0.3 ppm	
Light Mineral Oil (CAS 8042-47-5)	TWA	5 mg/m3	Inhalable fraction.
Thimerosal (CAS 54-64-8)	STEL	0.03 mg/m3	
	TWA	0.01 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Туре	Value	Form
Formaldehyde (CAS 50-00-0)	Ceiling	0.1 ppm	
	TWA	0.016 ppm	
Light Mineral Oil (CAS 8042-47-5)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Thimerosal (CAS 54-64-8)	STEL	0.03 mg/m3	
	TWA	0.01 mg/m3	

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

Exposure guidelines

US - California OELs: Skin designation

Thimerosal (CAS 54-64-8)

Can be absorbed through the skin.

US - Tennessee OELs: Skin designation

Thimerosal (CAS 54-64-8)

Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Thimerosal (CAS 54-64-8)

Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Thimerosal (CAS 54-64-8) Can be absorbed through the skin.

Appropriate engineering

Ensure adequate ventilation, especially in confined areas.

controls

Individual protection measures, such as personal protective equipment

Eye/face protection Safety glasses.

Skin protection

Hand protection Use a needle guard to help prevent self-injection. 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.

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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 Not available.

range

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

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.

Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity < 20.5 mm²/s at 40 C

Other information

Explosive properties Not explosive. **Oxidizing properties** Not oxidizing.

10. Stability and reactivity

ReactivityThe 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 Hazardous polymerization does not occur.

Possibility of nazardo

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 May be fatal if swallowed and enters airways.

Components Species Test Results

Formaldehyde (CAS 50-00-0)

Acute Inhalation

LC50 Rat 10500 mg/m³, 4 hours

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Components Species Test Results

Oral

LD50 Rat 640 mg/kg

Thimerosal (CAS 54-64-8)

Acute Oral

LD50 Rat 75 mg/kg

Skin corrosion/irritation Rabbit: Corrosive. (Formaldehyde)

No skin irritation. (0.1% Thimerosal)

Based on available data, the classification criteria are not met.

Serious eye damage/eye

irritation

Rabbit: Corrosive. (Formaldehyde) Slight irritation. (0.1% Thimerosal)

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)

Risk of sensitization or allergic reactions among sensitive individuals. (Thimerosal)

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)

Result in genetic toxicity assays (in vitro and in vivo): Negative (Thimerosal)

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)

May damage fertility or the unborn child. (Thimerosal)

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)

May cause damage to organs through prolonged or repeated exposure. (Thimerosal)

Based on available data, the classification criteria are not met.

Aspiration hazard May be fatal if swallowed and enters airways. (Mineral oil)

Further information Accidental injection may cause local swelling, irritation or necrosis at the injection site.

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

Material name: ReproSTAR L5 HB

Components Species Test Results

Thimerosal (CAS 54-64-8)

Aquatic Acute

Fish LC50 Bullhead, catfish (Ictalurus sp.) 7.5 mg/l, 24 hours

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 soilNo data available.Other adverse effectsNot 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 Not established.

Annex II of MARPOL 73/78 and

the IBC Code

15. Regulatory information

US federal regulations This product is 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) Thimerosal (CAS 54-64-8)

Material name: ReproSTAR L5 HB sps us

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

California Proposition 65 - CRT: Listed date/Developmental toxin

Thimerosal (CAS 54-64-8) Listed: July 1, 1990

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 regionInventory nameOn inventory (yes/no)*CanadaDomestic Substances List (DSL)NoCanadaNon-Domestic Substances List (NDSL)NoUnited States & Puerto RicoToxic Substances Control Act (TSCA) InventoryNo

16. Other information, including date of preparation or last revision

 Issue date
 09-12-2017

 Revision date
 04-01-2019

Version # 02

Disclaimer As of the date of issuance, we are providing available information relevant to the handling of this

material in the workplace. All information contained herein is offered with the good faith belief that it is accurate. THIS SAFETY DATA SHEET SHALL NOT BE DEEMED TO CREATE ANY WARRANTY OF ANY KIND (INCLUDING WARRANTY OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE). In the event of an adverse incident associated with this material, this safety data sheet is not intended to be a substitute for consultation with appropriately trained personnel. Nor is this safety data sheet intended to be a substitute for product literature

which may accompany the finished product.

For additional information contact:

Elanco Animal Health 0011+1-877-352-6261 0011+1-800-428-4441

Material name: ReproSTAR L5 HB SDS US

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^{*}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).