

## SAFETY DATA SHEET



### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

<b>Material</b>	<b>EPIVIR-HBV ORAL SOLUTION</b>
<b>Synonym(s)</b>	EPIVIR-HBV ORAL SOLUTION 5 MG/1 ML * HEPTODIN ORAL SOLUTION 5 MG/ML * HEPTOVIR ORAL SOLUTION 5 MG/ML * ZEFFIX ORAL SOLUTION 5 MG/ML * NDC NO 0173-0663-00 * LAMIVUDINE, FORMULATED PRODUCT
<b>Company Name</b>	<p>GlaxoSmithKline, Corporate Environment, Health &amp; Safety 980 Great West Road Brentford, Middlesex TW8 9GS UK</p> <p>UK General Information: +44-20-8047-5000 Transport Emergency (EU) +44-1865-407333 Medical Emergency +1-612-221-3999, Ext 221 Information and Advice: US number, available 24 hours Multi-language response</p> <p>GlaxoSmithKline, Corporate Environment, Health &amp; Safety One Franklin Plaza, 200 N 16th Street Philadelphia, PA 19102-1225 US</p> <p>US General Information: +1-888-825-5249 Transport Emergency (non EU) +1-703-527-3887 US number, available 24 hours Multi-language response</p>

### \* 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS #	Percent	EC-No.
LAMIVUDINE	134678-17-4	0.05	
NON-HAZARDOUS INGREDIENTS	Unassigned	99.95	

### 3. HAZARDS IDENTIFICATION

<b>Fire and Explosion</b>	This product is classified as non-flammable.
<b>Health</b>	<p>Caution - Pharmaceutical agent.</p> <p>May produce adverse effects on the development of human offspring.</p> <p>Possible effects of overexposure in the workplace include: abdominal pain; headache; nausea; vomiting; fatigue; rash.</p> <p>Exposure might occur via ingestion; skin; eyes.</p> <p>Health effects information is based on hazards of components.</p>
<b>Environment</b>	No environmental hazards have been identified for this material.

### 4. FIRST-AID MEASURES

<b>Ingestion</b>	Never attempt to induce vomiting. Do not attempt to give any solid or liquid by mouth if the exposed subject is unconscious or semi-conscious. Wash out the mouth with water. If the exposed subject is fully conscious, give plenty of water to drink. Obtain medical attention.
<b>Inhalation</b>	Physical form suggests that risk of inhalation exposure is negligible.

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**Skin Contact** Using appropriate personal protective equipment, remove contaminated clothing and flush exposed area with large amounts of water. Obtain medical attention if skin reaction occurs, which may be immediate or delayed.

**Eye Contact** Wash immediately with clean and gently flowing water. Continue for at least 15 minutes. Obtain medical attention.

**NOTES TO HEALTH PROFESSIONALS**

**Medical Treatment** Medical treatment in cases of overexposure should be treated as an overdose of an anti-viral agent. Treat according to locally accepted protocols. For additional guidance, refer to the local poison control information centre.

**Medical Conditions Caused or Aggravated by Exposure** Refer to prescribing information for detailed description of medical conditions caused by or aggravated by overexposure to this product.

**Health Surveillance Procedures** Pre-placement and periodic health surveillance is not usually indicated. The final determination of the need for health surveillance should be determined by local risk assessment.

**Antidotes** No specific antidotes are recommended.

## 5. FIRE-FIGHTING MEASURES

**Fire and Explosion Hazards** Not expected for the product, although the packaging is combustible.

**Extinguishing Media** Water, dry powder or foam extinguishers are recommended. Carbon dioxide extinguishers may be ineffective.

**Special Firefighting Procedures** For single units (packages): No special requirements needed. For larger amounts (multiple packages/pallets) of product: Since toxic, corrosive or flammable vapours might be evolved from fires involving this product and associated packaging, self contained breathing apparatus and full protective equipment are recommended for firefighters. If possible, contain and collect firefighting water for later disposal.

**Hazardous Combustion Products** Toxic, corrosive or flammable thermal decomposition products are expected when the product is exposed to fire.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions** Wear protective clothing and equipment consistent with the degree of hazard.

**Environmental Precautions** Prevent entry into waterways, sewers, surface drainage systems and poorly ventilated areas.

**Clean-up Methods** Spread an inert absorbent on the spill and place in a suitable, properly labelled container for recovery or disposal.

**Decontamination Procedures** Water can be used for clean-up and decontamination operations.

## 7. HANDLING AND STORAGE

**HANDLING**

**General Requirements** No special control measures required for the normal handling of this product. Normal room ventilation is expected to be adequate for routine handling of this product.

**STORAGE** No storage requirements necessary for occupational hazards. Follow product information storage instructions to maintain efficacy.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**INGREDIENT** LAMIVUDINE

**GSK Occupational Hazard Category** 2

**GSK Occupational Exposure Limit** 600 mcg/m<sup>3</sup> (8 HR TWA)      REPRODUCTIVE HAZARD

**Other Equipment or Procedures** None required for normal handling. Wash hands and arms thoroughly after handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

**Physical Form** Solution.

## 10. STABILITY AND REACTIVITY

**Stability** This product is expected to be stable.

**Conditions to Avoid** None for normal handling of this product.

## 11. TOXICOLOGY INFORMATION

**Pharmacological Effects** This preparation contains ingredient(s) with the following activity: an anti-viral agent.

**Target Organ Effects** No specific target organ effects have been identified.

### Routes of Exposure

**Oral Toxicity** Not expected to be toxic following ingestion.

**Skin Effects** Irritation is not expected following direct contact.

**Eye Effects** Irritation is not expected following direct contact with eyes.

**Sensitisation** Sensitisation (allergic skin reaction) is not expected.

**Genetic Toxicity** Not expected to be genotoxic, based on effects of individual components.

**Carcinogenicity** No components are listed as carcinogens by GSK, IARC, NTP or US OSHA.

**Reproductive Effects** Contains components which have been classified as: Possible risk of toxicity in developing human offspring.

**Other Adverse Effects** The following adverse effects have been noted with therapeutic use of this material: abdominal pain; headache; nausea; vomiting; fatigue; rash.

## 12. ECOLOGICAL INFORMATION

**Summary** This material contains an active pharmaceutical ingredient that has been tested, and no environmental effects have been identified. Local regulations and procedures should be consulted prior to environmental release.

Specific information on the active pharmaceutical ingredient is provided below.

### ECOTOXICITY

#### Aquatic

**Microbial Growth Inhibition** This material contains an active pharmaceutical ingredient that is not toxic to these microorganisms.

**Minimum Inhibition Concentration:**

- > 1000 mg/l, , Azotobacter beijerinckii
- > 1000 mg/l, , Pseudomonas aeruginosa
- > 1000 mg/l, , Trichoderma harzianum
- > 1000 mg/l, , Aspergillus niger
- > 1000 mg/l, , Nostoc commune

**Algal** This material contains an active pharmaceutical ingredient that is not toxic to algae.

IC50: > 96.9 mg/l, 72 Hours, Selenastrum capricornutum, green algae

NOEC: > 96.9 mg/l, 72 Hours, Selenastrum capricornutum, green algae

**Daphnid** This material contains an active pharmaceutical ingredient that is not toxic to daphnids.

EC50: > 1000 mg/l, 48 Hours, Daphnia magna, Static test

NOEC: > 1000 mg/l, 48 Hours, Daphnia magna, Static test

Chronic EC50: > 100 mg/l, 7 Days, Ceriodaphnia dubia, 7 day static renewal

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	Chronic LOEC:	> 100 mg/l, 7 Days, Ceriodaphnia dubia
	Chronic NOEC:	100 mg/l, 7 Days, Ceriodaphnia dubia
<b>Fish</b>	This material contains an active pharmaceutical ingredient that is not toxic to fish.	
	Juvenile Oncorhynchus mykiss, rainbow trout	
	EC50:	> 97.7 mg/l, 96 Hours, Static test
<b>MOBILITY</b>		
<b>Solubility</b>	This material contains an active pharmaceutical ingredient that for environmental fate predictions has solubility in water.	
<b>Volatility</b>	This material contains an active pharmaceutical ingredient that will not readily enter into air from water.	
	Henrys Law Constant	1.00E-13 atm m <sup>3</sup> /mol, Estimated
<b>Adsorption</b>	This material contains an active pharmaceutical ingredient that is not likely to adsorb to soil or sediment if released directly to the environment.	
	Soil Sediment Sorption (log K <sub>oc</sub> ):	1.5 to 2.03, Measured
<b>Partitioning</b>	This material contains an active pharmaceutical ingredient with octanol/water partition coefficient data that suggests that for environmental fate predictions the active pharmaceutical ingredient will not have the tendency to distribute into fats.	
<b>PERSISTENCE/DEGRADATION</b>		
<b>Hydrolysis</b>	This material contains an active pharmaceutical ingredient that has been shown to be chemically stable in water. Hydrolysis is unlikely to be a significant depletion mechanism.	
	Half-Life, Neutral:	> 1 Years, Measured
<b>Photolysis</b>	This material contains an active pharmaceutical ingredient that is unlikely to undergo photodegradation.	
	UV/Visible Spectrum:	271 nm at pH 7
<b>Biodegradation</b>	This material contains an active pharmaceutical ingredient that is not readily biodegradable (as defined by 1993 OECD Testing Guidelines).	
	Aerobic - Ready	
	Percent Degradation:	< 1 %, 28 days, Modified Sturm test.
	Aerobic - Inherent	
	Percent Degradation:	4 %, 28 days, Modified Zahn-Wellens, primary biodegradation, loss of parent., Activated sludge
	Aerobic - Inherent	
	Percent Degradation:	0 %, 28 days, Modified Zahn-Wellens, DOC removal., Activated sludge
	Aerobic - Soil	
	Percent Degradation:	15 to 24 %, 64 days
<b>Bioaccumulation</b>	This material contains an active pharmaceutical ingredient that will not have a tendency to bioaccumulate in the food chain.	

### 13. DISPOSAL CONSIDERATIONS

<b>Disposal Recommendations</b>	Collect for recycling or recovery if possible. The disposal method for rejected products/returned goods must ensure that they cannot be re-sold or re-used.
<b>Regulatory Requirements</b>	Observe all local and national regulations when disposing of this product.

### 14. TRANSPORT INFORMATION

The SDS should accompany all shipments for reference in the event of spillage or accidental release. Only authorised persons trained and competent in accordance with appropriate national and international regulatory requirements may prepare dangerous goods for transport.

**UN Classification and Labelling****Transport Information**

Transportation and shipping of this product is not restricted. It has no known, significant hazards requiring special packaging or labelling for air, maritime, US or European ground transport purposes.

<b>15. REGULATORY INFORMATION</b>
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The information included below is an overview of the major regulatory requirements. It should not be considered to be an exhaustive summary. Local regulations should be consulted for additional requirements.

**EU Classification and Labelling**

Exempt from requirements of EU Dangerous Preparations directive - product regulated as a medicinal product, cosmetic product or medical device.

**US OSHA Standard (29 CFR Part 1910.1200)****Classification**

This product is classified as hazardous according to the OSHA Hazard Communication Standard.

**Other US Regulations****TSCA Status**

Exempt

<b>16. OTHER INFORMATION</b>
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**References**

GSK Hazard Determination

**SDS Version Number**

10

**SDS Sections Updated****Sections****Subsections**

COMPOSITION / INFORMATION ON INGREDIENTS

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, express or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for any particular purpose.