



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** SHINGRIX VACCINE

### Other means of identification

#### Synonyms

SHINGRIX\* (HZ/su) \* SHINGRIX (ZOSTER VACCINE RECOMBINANT, ADJUVANTED) SUSPENSION FOR INTRAMUSCULAR INJECTION \* VACCINE FOR PREVENTION OF HERPES ZOSTER (SHINGLES) \* RECOMBINANT PROTEIN gE, THERAPEUTIC VACCINE COMPONENT \* VARICELLA ZOSTER VIRUS (VZV) gE/AS01 VACCINE

**Recommended use** Medicinal Product.

This safety data sheet is written to provide health, safety and environmental information for people handling this formulated product in the workplace. It is not intended to provide information relevant to medicinal use of the product. In this instance patients should consult prescribing information/package insert/product label or consult their pharmacist or physician. For health and safety information for individual ingredients used during manufacturing, refer to the appropriate safety data sheet for each ingredient.

**Recommended restrictions** No other uses are advised.

### Manufacturer/Importer/Supplier/Distributor information

**COMPANY NAME** GlaxoSmithKline US  
**Address:** 5 Moore Drive  
Research Triangle Park, NC 27709 USA  
**Telephone:** +1-888-825-5249 (General Inquiries)  
**Email:** msds@gsk.com  
**Website:** www.gsk.com

### EMERGENCY CONTACTS

**Telephone:** CHEMTREC EMERGENCY NUMBERS  
+(1) 703 527 3887 (International)  
24/7; multi-language response  
**Contract Number:** CCN9484

**Telephone:** VERISK 3E GLOBAL INCIDENT RESPONSE  
+(1) 760 476 3971 (In country)  
+(1) 760 476 3962 or +(1) 866 519 4752 (International)  
24/7; multi-language response  
**Contract Number:** 334878

## 2. Hazard(s) identification

### Classified hazards

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

### Label elements

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

### Hazard(s) not otherwise classified (HNOC)

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
SUCROSE	SUGAR CANE SUGAR BEET SUGAR CONFECTIONER'S SUGAR ALPHA-D-GLUCOPYRANOSIDE, BETA-D-FRUCTOFURANOSYL GRANULATED SUGAR SUCRALOX	57-50-1	97.61

Chemical name	Common name and synonyms	CAS number	%
SODIUM PHOSPHATE, MONOBASIC	MONOSODIUM PHOSPHATE SODIUM DIHYDROGEN PHOSPHATE MONOSODIUM DIHYDROGEN PHOSPHATE SODIUM BIPHOSPHATE MONOSODIUM ORTHOPHOSPHATE PHOSPHORIC ACID, MONOSODIUM SALT MONOBASIC SODIUM PHOSPHATE MONOSODIUM HYDROGEN PHOSPHATE SODIUM DIPHOSPHATE ANHYDROUS SODIUM PRIMARY PHOSPHATE SODIUM PHOSPHATE	7558-80-7	1.02
POTASSIUM PHOSPHATE DIBASIC	PHOSPHORIC ACID, DIPOTASSIUM SALT DIBASIC POTASSIUM PHOSPHATE DIPOTASSIUM HYDROGEN PHOSPHAT E DIPOTASSIUM MONOHYDROGEN PHOSPHATE DIPOTASSIUM MONOPHOSPHATE DIPOTASSIUM ORTHOPHOSPHATE DIPOTASSIUM PHOSPHATE HYDROGEN DIPOTASSIUM PHOSPHAT E POTASSIUM BIPHOSPHATE POTASSIUM MONOHYDROGEN PHOSPHATE POTASSIUM MONOPHOSPHATE DKP DIPOTASSIUM HYDROGENORTHOPHOSPHATE DIPOTASSIUM HYDROGEN ORTHOPHOSPHATE POTASSIUM PHOSPHATE, DIBASIC, ANHYDROUS POTASSIUM HYDROGEN ORTHOPHOSPHATE POTASSIUM HYDROGEN PHOSPHATE	7758-11-4	0.73
RECOMBINANT PROTEIN gE		Unassigned	<1
Other components below reportable levels			<1

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. If breathing is difficult, trained personnel should give oxygen. Call a physician if symptoms develop or persist. Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<b>Skin contact</b>	Immediately flush skin with plenty of water. Take off contaminated clothing and wash before reuse. Get medical attention if symptoms occur.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>Ingestion</b>	If swallowed, rinse mouth with water (only if the person is conscious). If ingestion of a large amount does occur, call a poison control center immediately. Do not induce vomiting without advice from poison control center.
<b>Most important symptoms/effects, acute and delayed</b>	None known.
<b>Indication of immediate medical attention and special treatment needed</b>	No specific antidotes are recommended. Treat according to locally accepted protocols. For additional guidance, refer to the current prescribing information or to the local poison control information center.
<b>General information</b>	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. 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.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid prolonged exposure. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Storage temperature: between 2 °C (36 °F) and 8 °C (46 °F). Do not allow material to freeze. Dispose of properly if frozen.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### GSK

Components	Type	Value
POTASSIUM PHOSPHATE DIBASIC (CAS 7758-11-4)	8 HR TWA	5000 mcg/m <sup>3</sup>
	OHC	1
SODIUM PHOSPHATE, MONOBASIC (CAS 7558-80-7)	OHC	1

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

Components	Type	Value	Form
SUCROSE (CAS 57-50-1)	PEL	5 mg/m <sup>3</sup> 15 mg/m <sup>3</sup>	Respirable fraction. Total dust.

#### US. ACGIH Threshold Limit Values

Components	Type	Value
SUCROSE (CAS 57-50-1)	TWA	10 mg/m <sup>3</sup>

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
SUCROSE (CAS 57-50-1)	TWA	5 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	Respirable. Total

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

### Exposure guidelines

**Appropriate engineering controls** General ventilation normally adequate.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** If contact is likely, safety glasses with side shields are recommended.

<b>Skin protection</b>	
<b>Hand protection</b>	Not normally needed. For prolonged or repeated skin contact use suitable protective gloves.
<b>Other</b>	Wear suitable protective clothing as protection against splashing or contamination.
<b>Respiratory protection</b>	No personal respiratory protective equipment normally required. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	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. For advice on suitable monitoring methods, seek guidance from a qualified environment, health and safety professional.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Vial. Powder. (Lyophilized).
<b>Color</b>	White.
<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 available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive 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.

## 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>	Do not allow material to freeze. Dispose of properly if frozen.
<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>	None known. Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<b>Skin contact</b>	Health injuries are not known or expected under normal use.
<b>Eye contact</b>	Health injuries are not known or expected under normal use. Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Health injuries are not known or expected under normal use. May be harmful if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

**Symptoms related to the physical, chemical and toxicological characteristics** None known.

### Information on toxicological effects

**Acute toxicity** Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Components	Species	Test Results
SODIUM PHOSPHATE, MONOBASIC (CAS 7558-80-7)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	8290 mg/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Health injuries are not known or expected under normal use.  
**Serious eye damage/eye irritation** Health injuries are not known or expected under normal use. Direct contact with eyes may cause temporary irritation.

### Respiratory or skin sensitization

**Respiratory sensitization** No studies have been conducted.  
**Skin sensitization** None known. This product is not expected to cause skin sensitization.

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

**Carcinogenicity** Not classifiable as to carcinogenicity to humans. Carcinogenic effects are not expected as a result of occupational exposure.

### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

**Reproductive toxicity** Contains no ingredient listed as toxic to reproduction

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

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

**Aspiration hazard** Not likely, due to the form of the product.

**Chronic effects** Prolonged inhalation may be harmful.

**Further information** Caution - Pharmaceutical agent. Occupational exposure to the substance or mixture may cause adverse 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
SODIUM PHOSPHATE, MONOBASIC (CAS 7558-80-7)		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	EC50 Golden ide/orfe (Adult Leuciscus idus)	> 2400 mg/l, 48 hours Static test

Components	Species	Test Results
	Mosquito fish (Adult Gambusia affinis)	186 mg/l, 96 hours Static test

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Biodegradability**

**Percent degradation (Aerobic biodegradation-inherent)**

SUCROSE 69 % BOD5

**Bioaccumulative potential** Not available.

**Partition coefficient n-octanol / water (log Kow)**

SUCROSE -3

**Mobility in soil** Not available.

**Mobility in general** Not available.

**Volatility**

**Henry's law**

SUCROSE < 0 atm m<sup>3</sup>/mol Estimated

**Other adverse effects** Not available.

**13. Disposal considerations**

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not discharge into drains, water courses or onto the ground. Dispose in accordance with all applicable regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** 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). Avoid discharge into water courses or onto the ground.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

**14. Transport information**

**DOT**

Not regulated as a dangerous good.

Not available.

**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 applicable.

**15. Regulatory information**

**US federal regulations**

One or more components are not listed on TSCA. This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

## Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** No

### SARA 313 (TRI reporting)

Not regulated.

## Other federal regulations

### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

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

## 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
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*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).

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

**Issue date** 05-07-2018

**Revision date** 05-07-2018

**Version #** 03

**Further information** HMIS® is a registered trade and service mark of the ACA.

**HMIS® ratings** Health: 1  
Flammability: 0  
Physical hazard: 0

**NFPA ratings** Health: 1  
Flammability: 0  
Instability: 0

**References** GSK Hazard Determination

**Disclaimer** 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.

**Revision information**

Product and Company Identification: Synonyms  
Composition / Information on Ingredients: Undisclosed Ingredient Statement  
Handling and storage: Conditions for safe storage, including any incompatibilities  
Physical and chemical properties: Form  
Stability and reactivity: Chemical stability  
Ecological information: Ecotoxicity  
Ecological information: Persistence / degradability  
Other information, including date of preparation or last revision: Further information