

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Product Description: **E.coli Polyvalent 2 Agglutination Sera**  
Cat No. : **R30954901**

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals.  
Uses advised against No Information available

### 1.3. Details of the supplier of the safety data sheet

Company Oxoid Ltd  
Wade Road  
Basingstoke, Hants, UK  
RG24 8PW  
Tel: +44 (0) 1256 841144

**EU entity/business name**  
Oxoid Deutschland GmbH  
Postfach 10 07 53  
D-46483  
Wesel  
GERMANY  
Tel: + 49 (0) 281 1520  
Fax: 49 (0) 281 1521

E-mail address mbd-sds@thermofisher.com

### 1.4. Emergency telephone number

Chemtrec US: (800) 424-9300  
Chemtrec EU: 001-703-527-3887  
Chemtrec China: 400 120 4937

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### **CLP Classification - Regulation (EC) No 1272/2008**

#### **Physical hazards**

Based on available data, the classification criteria are not met

#### **Health hazards**

Based on available data, the classification criteria are not met

# SAFETY DATA SHEET

E.coli Polyvalent 2 Agglutination Sera

Revision Date 10-Dec-2021

## Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

## 2.2. Label elements

Signal Word

None

Hazard Statements

Precautionary Statements

## 2.3. Other hazards

No information available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Phenol	108-95-2	EEC No. 203-632-7	<1.0	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Muta. 2 (H341) STOT RE 2 (H373)
Sodium hydroxide	1310-73-2	215-185-5	<0.5	Skin Corr. 1A (H314) Eye Dam. 1 (H318)

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Phenol	Eye Irrit. 2 (H319) :: 1%≤C<3% Skin Corr. 1B (H314) :: C≥3% Skin Irrit. 2 (H315) :: 1%≤C<3%	-	-
Sodium hydroxide	Skin Corr. 1A :: C≥5% Skin Corr. 1B :: 2%≤C<5% Eye Irrit. 2 :: 0.5%≤C<2% Skin Irrit. 2 :: 0.5%≤C<2%	-	-

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

Eye Contact

Rinse thoroughly with plenty of water, also under the eyelids. Seek immediate medical attention/advice.

# SAFETY DATA SHEET

E.coli Polyvalent 2 Agglutination Sera

Revision Date 10-Dec-2021

<b>Skin Contact</b>	Wash off immediately with soap and plenty of water. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Get medical attention.
<b>Inhalation</b>	Remove to fresh air. Get medical attention if symptoms occur.
<b>Self-Protection of the First Aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

## **4.2. Most important symptoms and effects, both acute and delayed**

No information available.

## **4.3. Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

## **SECTION 5: FIREFIGHTING MEASURES**

### **5.1. Extinguishing media**

#### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

#### **Extinguishing media which must not be used for safety reasons**

No information available.

### **5.2. Special hazards arising from the substance or mixture**

Thermal decomposition can lead to release of irritating gases and vapors.

#### **Hazardous Combustion Products**

Hydrogen bromide, Carbon oxides, Nitrogen oxides (NO<sub>x</sub>).

### **5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation.

### **6.2. Environmental precautions**

Prevent further leakage or spillage if safe to do so.

### **6.3. Methods and material for containment and cleaning up**

Soak up with inert absorbent material. Clean contaminated surface thoroughly.

### **6.4. Reference to other sections**

# SAFETY DATA SHEET

E.coli Polyvalent 2 Agglutination Sera

Revision Date 10-Dec-2021

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Avoid contact with skin, eyes or clothing. Do not breathe mist/vapors/spray. Ensure adequate ventilation.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep at temperatures between 2° and 8 °C.

Technical Rules for Hazardous Substances (TRGS) 510 Class 12  
Storage Class (LGK) (Germany)

### 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

List source(s): EU - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC

Component	The United Kingdom	European Union	Ireland
Phenol	STEL: 4 ppm 15 min STEL: 16 mg/m <sup>3</sup> 15 min TWA: 2 ppm 8 hr TWA: 7.8 mg/m <sup>3</sup> 8 hr Skin	TWA: 2 ppm (8h) TWA: 8 mg/m <sup>3</sup> (8h) STEL: 4 ppm (15min) STEL: 16 mg/m <sup>3</sup> (15min) Skin	TWA: 2 ppm 8 hr. TWA: 8 mg/m <sup>3</sup> 8 hr. STEL: 4 ppm 15 min STEL: 16 mg/m <sup>3</sup> 15 min Skin
Sodium hydroxide	2 mg/m <sup>3</sup> STEL		STEL: 2 mg/m <sup>3</sup> 15 min

#### Biological limit values

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Phenol 108-95-2 ( <1.0 )				DNEL = 1.23mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Phenol 108-95-2 ( <1.0 )	DNEL = 16mg/m <sup>3</sup>			DNEL = 8mg/m <sup>3</sup>
Sodium hydroxide 1310-73-2 ( <0.5 )			DNEL = 1mg/m <sup>3</sup>	

# SAFETY DATA SHEET

E.coli Polyvalent 2 Agglutination Sera

Revision Date 10-Dec-2021

## Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Phenol 108-95-2 ( <1.0 )	PNEC = 0.0077mg/L	PNEC = 0.0915mg/kg sediment dw	PNEC = 0.031mg/L	PNEC = 2.1mg/L	PNEC = 0.136mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Phenol 108-95-2 ( <1.0 )	PNEC = 0.00077mg/L	PNEC = 0.00915mg/kg sediment dw			

## 8.2. Exposure controls

### Engineering Measures

Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### Eye Protection

Wear safety glasses with side shields (or goggles) (European standard - EN 166)

#### Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Disposable gloves	See manufacturers recommendations	-	EN 374	(minimum requirement)

#### Skin and body protection

Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.  
(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

#### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

#### Large scale/emergency use

In case of insufficient ventilation, wear suitable respiratory equipment

#### Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls** No information available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

# SAFETY DATA SHEET

E.coli Polyvalent 2 Agglutination Sera

Revision Date 10-Dec-2021

<b>Physical State</b>	Liquid	
<b>Appearance</b>	Amber	
<b>Odor</b>	No information available	
<b>Odor Threshold</b>	No data available	
<b>Melting Point/Range</b>	No data available	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	Not applicable	
<b>Flammability (liquid)</b>	No data available	
<b>Flammability (solid,gas)</b>	No information available	
<b>Explosion Limits</b>	No data available	
<b>Flash Point</b>	Not applicable	<b>Method -</b> No information available
<b>Autoignition Temperature</b>	No data available	
<b>Decomposition Temperature</b>	No data available	
<b>pH</b>	6.6 - 6.8	
<b>Viscosity</b>	No data available	
<b>Water Solubility</b>	No information available	
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>		
<b>Component</b>	<b>log Pow</b>	
Phenol	1.5	
<b>Vapor Pressure</b>	No data available	
<b>Density / Specific Gravity</b>	No data available	
<b>Bulk Density</b>	No data available	
<b>Vapor Density</b>	No data available	(Air = 1.0)
<b>Particle characteristics</b>	Not applicable (liquid)	

## 9.2. Other information

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None known, based on information available

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

**Hazardous Polymerization**  
**Hazardous Reactions**

Hazardous polymerization does not occur.  
None under normal processing.

### 10.4. Conditions to avoid

Incompatible products. Excess heat.

### 10.5. Incompatible materials

No materials to be especially mentioned.

### 10.6. Hazardous decomposition products

Hydrogen bromide. Carbon oxides. Nitrogen oxides (NOx).

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

# SAFETY DATA SHEET

E.coli Polyvalent 2 Agglutination Sera

Revision Date 10-Dec-2021

**Product Information** Product does not present an acute toxicity hazard based on known or supplied information

**(a) acute toxicity;**

**Oral**

Based on ATE data, the classification criteria are not met

**Dermal**

Based on ATE data, the classification criteria are not met

**Inhalation**

Based on ATE data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phenol	LD50 = 340 mg/kg ( Rat )	LD50 = 630 mg/kg ( Rabbit )	-
Sodium hydroxide	LD50 = 325 mg/kg ( Rat )	LD50 = 1350 mg/kg ( Rabbit )	-

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** No data available

**(d) respiratory or skin sensitization;**

**Respiratory**

No data available

**Skin**

No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;** No data available

The table below indicates whether each agency has listed any ingredient as a carcinogen

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs**

No information available.

**(j) aspiration hazard;** No data available

**Symptoms / effects, both acute and delayed** No information available.

## 11.2. Information on other hazards

### **Endocrine Disrupting Properties**

Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## **SECTION 12: ECOLOGICAL INFORMATION**

### 12.1. Toxicity

#### **Ecotoxicity effects**

. Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

# SAFETY DATA SHEET

E.coli Polyvalent 2 Agglutination Sera

Revision Date 10-Dec-2021

Component	Freshwater Fish	Water Flea	Freshwater Algae
Phenol	4-7 mg/L LC50 96 h 32 mg/L LC50 96 h	EC50: 10.2 - 15.5 mg/L, 48h (Daphnia magna) EC50: 4.24 - 10.7 mg/L, 48h Static (Daphnia magna)	EC50: 0.0188 - 0.1044 mg/L, 96h static (Pseudokirchneriella subcapitata) EC50: 187 - 279 mg/L, 72h static (Desmodesmus subspicatus) EC50: = 46.42 mg/L, 96h (Pseudokirchneriella subcapitata)
Sodium hydroxide	LC50: = 45.4 mg/L, 96h static (Oncorhynchus mykiss)		-

Component	Microtox	M-Factor
Phenol	EC50 21 - 36 mg/L 30 min EC50 = 23.28 mg/L 5 min EC50 = 25.61 mg/L 15 min EC50 = 28.8 mg/L 5 min EC50 = 31.6 mg/L 15 min	
Sodium hydroxide	-	

**12.2. Persistence and degradability** No information available

**12.3. Bioaccumulative potential** No information available

Component	log Pow	Bioconcentration factor (BCF)
Phenol	1.5	No data available

**12.4. Mobility in soil** No information available .

**12.5. Results of PBT and vPvB assessment** No data available for assessment.

**12.6. Endocrine disrupting properties**

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**12.7. Other adverse effects**  
**Persistent Organic Pollutant**  
**Ozone Depletion Potential**

This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

**Waste from Residues/Unused Products** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

**Contaminated Packaging** Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.

**European Waste Catalogue (EWC)** According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

**Other Information** Waste codes should be assigned by the user based on the application for which the product



# SAFETY DATA SHEET

E.coli Polyvalent 2 Agglutination Sera

Revision Date 10-Dec-2021

was used.

## SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO** Not regulated

**14.1. UN number**  
**14.2. UN proper shipping name**  
**14.3. Transport hazard class(es)**  
**14.4. Packing group**

**ADR** Not regulated

**14.1. UN number**  
**14.2. UN proper shipping name**  
**14.3. Transport hazard class(es)**  
**14.4. Packing group**

**IATA** Not regulated

**14.1. UN number**  
**14.2. UN proper shipping name**  
**14.3. Transport hazard class(es)**  
**14.4. Packing group**

**14.5. Environmental hazards** No hazards identified

**14.6. Special precautions for user** No special precautions required

**14.7. Maritime transport in bulk according to IMO instruments** Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Phenol	108-95-2	203-632-7	-	-	X	X	KE-28209	X	X
Sodium hydroxide	1310-73-2	215-185-5	-	-	X	X	KE-31487	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Phenol	108-95-2	X	ACTIVE	X	-	X	X	X
Sodium hydroxide	1310-73-2	X	ACTIVE	X	-	X	X	X

**Legend:** X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### Authorisation/Restrictions according to EU REACH

# SAFETY DATA SHEET

E.coli Polyvalent 2 Agglutination Sera

Revision Date 10-Dec-2021

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Phenol	-	Use restricted. See item 75. (see link for restriction details)	-
Sodium hydroxide	-	Use restricted. See item 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Phenol	108-95-2	Not applicable	Not applicable
Sodium hydroxide	1310-73-2	Not applicable	Not applicable

## Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work  
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.  
Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

## National Regulations

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

**WGK Classification** Water endangering class = 1 (self classification)

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Phenol	WGK2	Class I : 20 mg/m <sup>3</sup> (Massenkonzentration)
Sodium hydroxide	WGK1	

Component	France - INRS (Tables of occupational diseases)
Phenol	Tableaux des maladies professionnelles (TMP) - RG 14

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Phenol 108-95-2 ( <1.0 )	Prohibited and Restricted Substances		
Sodium hydroxide 1310-73-2 ( <0.5 )	Prohibited and Restricted Substances		

## 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## SECTION 16: OTHER INFORMATION

**Full text of H-Statements referred to under sections 2 and 3**

OXDR30954901

# SAFETY DATA SHEET

E.coli Polyvalent 2 Agglutination Sera

Revision Date 10-Dec-2021

H341 - Suspected of causing genetic defects  
H373 - May cause damage to organs through prolonged or repeated exposure  
H301 - Toxic if swallowed  
H311 - Toxic in contact with skin  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H331 - Toxic if inhaled

## Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/MDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

### **Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

### **Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

**Creation Date** 05-Jan-2012  
**Revision Date** 10-Dec-2021  
**Revision Summary** Not applicable.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006**

### **Disclaimer**

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

**End of Safety Data Sheet**