

Laemmli buffer (1x)

Safety data sheet

Prepared in accordance with Regulation (EC) No. 1907/2006 (REACH)

Version 1.0 | Created: 23 January 2014 | Revised: 1 June 2015

SECTION 1. Identification of the substance/mixture and of the company/undertaking

Product name and description	Laemmli buffer (1x)
Trade name/Brand	Not applicable
Synonym(s)	SDS sample loading buffer
REACH Number	Not applicable, mixture
CAS Number	Not applicable, mixture
EC Number	Not applicable, mixture
Recommended use	<p>This product is a laboratory preparation for educational use only.</p> <p>The buffer is ready-to-use. It should be used for protein gel electrophoresis as described in the relevant Teacher's and Students' guides provided by the NCBE.</p> <p>Please note that this laemmli buffer is a special formulation for school use. Most laemmli buffer recipes include mercaptoethanol, but this one does not. It is not the same as similar products manufactured by Severn Biotech or supplied by other manufacturers.</p>
Uses advised against	None
Supplier of the product and of this safety data sheet	<p>National Centre for Biotechnology Education (NCBE) University of Reading 2 Earley Gate Whiteknights READING RG6 6AU United Kingdom</p> <p>T: 0118 9873743 F: 0118 9750140 E: NCBE@reading.ac.uk W: www.ncbe.reading.ac.uk</p>
Manufacturer of the product	<p>Severn Biotech Limited Unit 2 Park Lane KIDDERMINSTER DY11 6TJ</p>
Emergency telephone number	0118 9873743 (NCBE, University of Reading. 08.30–17.00 weekdays only)

SECTION 2. Hazards identification

Classification according to Regulation (EC) No. 1272/2008 [CLP]	H302	Harmful if swallowed.
	H315	Skin corrosion/irritation (Category 2).
	H319	Causes serious eye irritation (Category 2B).

Label elements

WARNING

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

P305+P351
+P338+P315 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P337+P313 IF eye irritation persists: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of soap and water

P308+P313 IF exposed or concerned: Call a POISON CENTRE or doctor/physician.



Other hazards

None found.

Note: Some statements above are omitted from the product label, as the volume of the mixture is less than 125 ml.

SECTION 3. Composition/Information on the ingredients

Name of component (Synonym) [CLP index number]	Weight (%)	EC (EINECS) number	CAS number	REACH registration number	Classification under Regulation (EC) No 1272/2008 [CLP]*
Water	~69.07	231-791-2	7732-18-5	-	-
Glycerol (Propane-1,2,3-triol)	29.00	200-289-5	56-81-5	-	-
SDS (Sodium dodecyl sulphate; Sodium lauryl sulfate)	1.84	205-788-1	151-21-3	-	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)
TRIS (Trometamol; tris(hydroxymethyl)aminomethane; 2-Amino-2-hydroxymethyl-propane-1,3-diol)	0.07	201-064-4	77-86-1	-	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)
Bromophenol blue, sodium salt	0.009	252-170-2	34725-61-6	-	-

* Note that these classifications refer to the pure (100%) substances, not necessarily to the mixture supplied.

For the full text of the safety classifications (H-statements), refer to Section 16.

SECTION 4. First aid measures

General information	The principal hazards from this concentrate are skin and eye contact.
Inhalation	Move the casualty to fresh air. If respiratory problems occur, consult a doctor.
Skin contact	Remove contaminated clothing, which can then be washed as normal. Wash the Laemmli buffer off the skin immediately with plenty of water. Seek medical attention if irritation occurs.
Eye contact	Check for and remove contact lenses if present. Rinse opened eye immediately with running water, also wash under the eyelids, for several minutes. Seek medical advice if irritation persists. (Note that SDS is a surfactant used in shampoos, etc. A typical shampoo may contain 5–10% SDS — far more than the ~2% found in Laemmli buffer).
Ingestion	Rinse out mouth with water, then drink plenty of water. Do not induce vomiting.
Self-protection of the first aider	Rinse your hands with water after handling anything that has been contaminated with the TB buffer solution.
Most important symptoms and effects, both acute and delayed	Irritation to the skin and eyes.
Indication of any immediate medical attention and special treatment	First Aid as outlined above, decontamination of clothing <i>etc</i> , treatment by a medical professional if symptoms persist.
Advice to doctor	Treat symptomatically.

SECTION 5. Fire fighting measures

Suitable extinguishing media	Use water spray, dry chemical or carbon dioxide.
Extinguishing media which must not be used for safety reasons	No information available.
Special hazards arising from the substance or mixture	No information available.
Advice for fire fighters	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

The volumes of Laemmli buffer that are likely to be used in a school are small enough that any spill can be cleaned up easily and safely. The principal dangers are skin and eye contact, as described in Section 4 above.

Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation. Wear personal protective equipment, such as a lab coat, gloves and eye protection. Keep students away from the spill.
Environmental precautions	If spilt, the Laemmli buffer should be washed away (diluted) with plenty of water.
Methods and materials for containment and cleaning up	Soak up the spill with inert absorbent material (e.g., paper towels). Place the waste in a suitable, closed container (e.g., a plastic bag) for disposal. Wash away any residue with plenty of water.

SECTION 7. Handling and storage

Precautions for safe handling

Ensure adequate ventilation and avoid the formation of aerosols. Wear personal protective equipment, such as a lab coat, gloves and eye protection. Do not get into eyes, on skin or clothing. Do not breathe in vapours or dust from dried-up solution. Do not ingest.

Conditions for safe storage

Keep the Laemmli buffer in a tightly-closed container. Store in a dry, cool and well-ventilated place. Do not refrigerate.

SECTION 8. Exposure control/personal protection

Control parameters

Exposure limits

Components with workspace control parameters

Component	CAS Number	Workplace exposure limit	Legal basis
Glycerol, mist	56-81-5	Long term exposure limit (8 hour time-weighted average reference period) 10 mg/m ³	UK. EH40 WEL

Biological limit values

No information available.

Derived no effect level

No information available.

Predicated no effect level

No information available.

Exposure controls

Handle in accordance with good laboratory hygiene and safety practice. Wash hands before breaks and after handling the mixture.

SECTION 9. Physical and chemical properties

Appearance

Clear, blue/violet colour.

Physical state

Liquid.

Odour

Odourless.

Odour threshold

Does not apply, as the mixture is odourless.

pH

6.8 @ 20 °C

Melting point / Range

No data available.

Boiling point / Range

> 100 °C @ 760 mm Hg.

Flash point

Not applicable; does not flash.

Evaporation rate

No data available.

Flammability (solid, gas)

Not applicable as the mixture is a liquid.

Explosion limits

No data available.

Vapour pressure

No data available.

Vapour density

No data available.

Density @ 20 °C

~ 1.00 g / ml

Relative density

Not applicable as the mixture is a liquid.

Solubility in water

Readily soluble.

Solubility in other solvents

No data available.

Partition coefficient: n-octanol/water

No data available.

Autoignition temperature

No data available.

Decomposition temperature

No data available.

Viscosity

No data available.

Explosive properties

No data available.

Oxidising properties

No data available.

Other information

No additional information relevant to the safe use of the substance.

SECTION 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	When stored at room temperature, the product is stable.
Possibility of hazardous reactions	No known hazardous reactions.
Conditions to avoid	Do not refrigerate.
Incompatible materials	No information available.
Hazardous decomposition products	No hazardous decomposition products.

SECTION 11. Toxicological information

Acute toxicity	No information available.
Irritation	No information available.
Corrosivity	No information available.
Sensitisation	No information available.
Repeated dose toxicity	No information available.
Carcinogenicity	No information available.
Mutagenicity	No information available.
Toxicity for reproduction	No information available.

SECTION 12. Ecological information

Toxicity	No information available.
Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility in soil	No information available.
Results of PBT and vPVB assessment	No information available.
Other adverse effects	None known.

SECTION 13. Disposal considerations

Waste from residues/unused product	Wash down a foul water drain with water. Wipe up any spills of the solution with absorbent material (e.g., paper towels) and water. Dispose of the paper towels in the normal waste.
Contaminated packaging	Rinse with water and dispose of in normal waste according to local regulations. Recycle (the bottles are HDPE) where appropriate facilities are available.

SECTION 14. Transport information

UN number	Not applicable.
UN proper shipping name	Not applicable.
Transport hazard class	Not applicable.
Packaging group	Not applicable.
Environmental hazards	Not applicable.

SECTION 15. Regulatory information

Not regulated.

SECTION 16. Other information

Full text of GHS hazard statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Please refer to the Teacher's guide that accompanies the NCBE *Protein power!* kit you are using the Laemmli buffer with. This can be downloaded from the NCBE's Web site: www.ncbe.reading.ac.uk

The information given in this safety data sheet is based on the present state of our knowledge.

This safety data sheet has been compiled and is solely intended for this product.

END OF SAFETY DATA SHEET