

Coomassie blue stain

Safety data sheet

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

Version 2.0 | Created: 1 June 2015 | Revised: 26 June 2015

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

Product name and description	Coomassie blue stain
Trade name/Brand	Not applicable
Synonym(s)	Colloidal Coomassie blue; Coomassie brilliant blue G 250
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>10 ml of a 20% (w/v) sodium chloride solution should be added to each 100 ml of the stain solution before use. The solution should then be used for protein gel electrophoresis as described in the relevant Teacher's and Students' guides provided by the NCBE (see note in Section 16).</p> <p>Please note that this Coomassie blue stain is a special formulation for school use. Most Coomassie blue stain recipes include methanol and ethanoic (acetic) acid, 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] H315 Skin irritation (Category 2)
H319 Serious eye irritation (Category 2)

Label elements* **WARNING**
H315 Causes skin irritation
H319 Causes serious eye irritation

P280 Wear protective gloves/ protective clothing/ eye protection
P305 IF IN EYES: Rinse cautiously with water for several minutes.
+ P351 Remove contact lenses, if present and easy to do. Continue rinsing.
+ P338
P302+P352 IF ON SKIN: Wash with plenty of soap and water

Other hazards None found.

* 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	92.60	231-791-2	7732-18-5	-	-
Ammonium sulphate (Ammonium sulfate)	5.00	231-984-1	7783-20-2	-	-
Phosphoric acid (Orthophosphoric acid) [015-011-00-6]	2.00	231-633-2	7664-38-2	-	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)
Coomassie brilliant blue G (Hydrogen [4-[4-(p-ethoxyanilino)-4'-[ethyl(m-sulphonatobenzyl)amino]-2'-methylbenzhydrylene]-3-methylcyclohexa-2,5-dien-1-ylidene] (ethyl)(m-sulphonatobenzyl)ammonium, monosodium salt)	0.20	228-058-4	6104-58-1	-	-

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

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

SECTION 4. First aid measures

General information Causes skin irritation and serious eye irritation (pH 2.0).

Inhalation Move the casualty to fresh air. If respiratory problems occur, consult a doctor.

Skin contact IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs get medical advice/attention. Wash contaminated clothing as normal before reuse.

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.

Ingestion Rinse out mouth with water, then drink plenty of water.
Do not induce vomiting.

Self-protection of the first aider	Wear gloves and eye protection. Rinse your hands with soap and water after handling anything that has been contaminated with the solution.
Most important symptoms and effects, both acute and delayed	Irritation and redness.
Indication of any immediate medical attention and special treatment	Wash affected area immediately with water.
Advice to doctor	Treat symptomatically.

SECTION 5. Fire fighting measures

Not applicable. The product is 93% water.

SECTION 6. Accidental release measures

The volumes of Coomassie blue solution that are likely to be used in a school are small enough that any spill can be cleaned up easily and safely.

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 Coomassie blue solution 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 Coomassie blue solution 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	Not applicable.
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, purple colour.
Physical state	Liquid.
Odour	Odourless.
Odour threshold	Does not apply, as the mixture is odourless.
pH	2.0 @ 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

H315	Causes skin irritation.
H319	Causes serious eye irritation.

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

Note that if you forget to add the salt to the Coomassie blue stain before use, the stain will still work, but the gels will require prolonged destaining (i.e., for several days) in water.

This Safety Data Sheet was revised on 26 June 2015 to take account of a new formulation containing 2% phosphoric acid.

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