

SAFETY DATA SHEET

Agilent Protein 80 Reagents, Part Number 5067-1516

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

1.1 Product identifier

Product name	: Agilent Protein 80 Reagents, Part Number 5067-1516	
Part no. (chemical kit)	: 5067-1516	
Part no.	: <u>Reagents P80</u>	: <u>G2938-80025</u>
	Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	<u>Reagents P80 frozen</u>	: <u>G2938-80040</u>
	Protein 80 Sample Buffer	Not available.
	Protein 80 Ladder	Not available.

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

Identified uses	: Analytical reagent. Research and Development	
	Protein 80 Gel Matrix	4 x 0.65 ml
	Protein 80 Dye Concentrate	1 x 0.09 ml
	Protein 80 Sample Buffer	4 x 0.2 ml
	Protein 80 Ladder	1 x 0.18 ml
Uses advised against	: None known.	

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition	: Protein 80 Gel Matrix	Mixture
	Protein 80 Dye Concentrate	Mixture
	Protein 80 Sample Buffer	Mixture
	Protein 80 Ladder	Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

Protein 80 Gel Matrix	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Protein 80 Dye Concentrate	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Protein 80 Sample Buffer	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Protein 80 Ladder	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

SECTION 2: Hazards identification

Ingredients of unknown toxicity	: Protein 80 Gel Matrix	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 10 - 30%
		Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
	Protein 80 Dye Concentrate	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
	Protein 80 Sample Buffer	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
		Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%
	Protein 80 Ladder	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10%
		Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
Ingredients of unknown ecotoxicity	: Protein 80 Gel Matrix	Contains 2.2% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word	: Protein 80 Gel Matrix	No signal word.
	Protein 80 Dye Concentrate	No signal word.
	Protein 80 Sample Buffer	No signal word.
	Protein 80 Ladder	No signal word.
Hazard statements	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	Protein 80 Sample Buffer	No known significant effects or critical hazards.
	Protein 80 Ladder	No known significant effects or critical hazards.

Precautionary statements

Prevention	: Protein 80 Gel Matrix	Not applicable.
	Protein 80 Dye Concentrate	Not applicable.
	Protein 80 Sample Buffer	Not applicable.
	Protein 80 Ladder	Not applicable.
Response	: Protein 80 Gel Matrix	Not applicable.
	Protein 80 Dye Concentrate	Not applicable.
	Protein 80 Sample Buffer	Not applicable.
	Protein 80 Ladder	Not applicable.
Storage	: Protein 80 Gel Matrix	Not applicable.
	Protein 80 Dye Concentrate	Not applicable.
	Protein 80 Sample Buffer	Not applicable.
	Protein 80 Ladder	Not applicable.
Disposal	: Protein 80 Gel Matrix	Not applicable.
	Protein 80 Dye Concentrate	Not applicable.
	Protein 80 Sample Buffer	Not applicable.
	Protein 80 Ladder	Not applicable.
Supplemental label elements	: Protein 80 Gel Matrix	Safety data sheet available on request.
	Protein 80 Dye Concentrate	Safety data sheet available on request.
	Protein 80 Sample Buffer	Safety data sheet available on request.
	Protein 80 Ladder	Safety data sheet available on request.

SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Protein 80 Gel Matrix	Not applicable.
	Protein 80 Dye Concentrate	Not applicable.
	Protein 80 Sample Buffer	Not applicable.
	Protein 80 Ladder	Not applicable.

Special packaging requirements

Tactile warning of danger	Protein 80 Gel Matrix	Not applicable.
	Protein 80 Dye Concentrate	Not applicable.
	Protein 80 Sample Buffer	Not applicable.
	Protein 80 Ladder	Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	Protein 80 Gel Matrix	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	Protein 80 Dye Concentrate	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	Protein 80 Sample Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	Protein 80 Ladder	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification	Protein 80 Gel Matrix	None known.
	Protein 80 Dye Concentrate	None known.
	Protein 80 Sample Buffer	None known.
	Protein 80 Ladder	None known.

SECTION 3: Composition/information on ingredients

3.1 Substances	Protein 80 Gel Matrix	Mixture
	Protein 80 Dye Concentrate	Mixture
	Protein 80 Sample Buffer	Mixture
	Protein 80 Ladder	Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Protein 80 Gel Matrix trometamol	EC: 201-064-4 CAS: 77-86-1	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319	-	[1]
Protein 80 Dye Concentrate sodium dodecyl sulphate	EC: 205-788-1 CAS: 151-21-3	<10	Flam. Sol. 2, H228 Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 3, H412	ATE [Oral] = 1288 mg/kg ATE [Inhalation (dusts and mists)] = 1.5 mg/l Eye Dam. 1, H318: C ≥ 20% Eye Irrit. 2, H319: 10% ≤ C < 20% M [Acute] = 1	[1]
Protein 80 Sample Buffer lithium dodecyl sulphate	EC: 218-058-2 CAS: 2044-56-6	≤5	Flam. Sol. 1, H228 Acute Tox. 4, H302	ATE [Oral] = 500 mg/kg	[1]

SECTION 3: Composition/information on ingredients

trometamol	EC: 201-064-4 CAS: 77-86-1	≤3	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412 Skin Irrit. 2, H315 Eye Irrit. 2, H319	ATE [Inhalation (dusts and mists)] = 1.5 mg/l Eye Dam. 1, H318: C ≥ 20% Eye Irrit. 2, H319: 10% ≤ C < 20%	[1]
Protein 80 Ladder					
glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥10 - ≤25	Not classified.	-	[2]
trometamol	EC: 201-064-4 CAS: 77-86-1	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319	-	[1]
lithium dodecyl sulphate	EC: 218-058-2 CAS: 2044-56-6	≤3	Flam. Sol. 1, H228 Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 500 mg/kg ATE [Inhalation (dusts and mists)] = 1.5 mg/l Eye Dam. 1, H318: C ≥ 20% Eye Irrit. 2, H319: 10% ≤ C < 20%	[1]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type	
Protein 80 Gel Matrix	[1] Substance classified with a health or environmental hazard
Protein 80 Dye Concentrate	[1] Substance classified with a health or environmental hazard
Protein 80 Sample Buffer	[1] Substance classified with a health or environmental hazard
Protein 80 Ladder	[1] Substance classified with a health or environmental hazard [2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: Protein 80 Gel Matrix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Protein 80 Dye Concentrate	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Protein 80 Sample Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Protein 80 Ladder	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

SECTION 4: First aid measures

Inhalation	: Protein 80 Gel Matrix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Protein 80 Dye Concentrate	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Protein 80 Sample Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Protein 80 Ladder	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact	: Protein 80 Gel Matrix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Protein 80 Dye Concentrate	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Protein 80 Sample Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Protein 80 Ladder	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Protein 80 Gel Matrix	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Protein 80 Dye Concentrate	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Protein 80 Sample Buffer	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Protein 80 Ladder	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Protection of first-aiders	: Protein 80 Gel Matrix	No action shall be taken involving any personal risk or without suitable training.
	Protein 80 Dye Concentrate	No action shall be taken involving any personal risk or without suitable training.
	Protein 80 Sample Buffer	No action shall be taken involving any personal risk or without suitable training.
	Protein 80 Ladder	No action shall be taken involving any personal risk or without suitable training.

SECTION 4: First aid measures**4.2 Most important symptoms and effects, both acute and delayed**Potential acute health effects

Eye contact	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	Protein 80 Sample Buffer	No known significant effects or critical hazards.
	Protein 80 Ladder	No known significant effects or critical hazards.
Inhalation	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	Protein 80 Sample Buffer	No known significant effects or critical hazards.
	Protein 80 Ladder	No known significant effects or critical hazards.
Skin contact	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	Protein 80 Sample Buffer	No known significant effects or critical hazards.
	Protein 80 Ladder	No known significant effects or critical hazards.
Ingestion	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	Protein 80 Sample Buffer	No known significant effects or critical hazards.
	Protein 80 Ladder	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: Protein 80 Gel Matrix	No specific data.
	Protein 80 Dye Concentrate	No specific data.
	Protein 80 Sample Buffer	No specific data.
	Protein 80 Ladder	No specific data.
Inhalation	: Protein 80 Gel Matrix	No specific data.
	Protein 80 Dye Concentrate	No specific data.
	Protein 80 Sample Buffer	No specific data.
	Protein 80 Ladder	No specific data.
Skin contact	: Protein 80 Gel Matrix	No specific data.
	Protein 80 Dye Concentrate	No specific data.
	Protein 80 Sample Buffer	No specific data.
	Protein 80 Ladder	No specific data.
Ingestion	: Protein 80 Gel Matrix	No specific data.
	Protein 80 Dye Concentrate	No specific data.
	Protein 80 Sample Buffer	No specific data.
	Protein 80 Ladder	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: Protein 80 Gel Matrix	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Protein 80 Dye Concentrate	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Protein 80 Sample Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Protein 80 Ladder	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

SECTION 4: First aid measures

Specific treatments	: Protein 80 Gel Matrix	No specific treatment.
	Protein 80 Dye Concentrate	No specific treatment.
	Protein 80 Sample Buffer	No specific treatment.
	Protein 80 Ladder	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Protein 80 Gel Matrix	Use an extinguishing agent suitable for the surrounding fire.
	Protein 80 Dye Concentrate	Use an extinguishing agent suitable for the surrounding fire.
	Protein 80 Sample Buffer	Use an extinguishing agent suitable for the surrounding fire.
	Protein 80 Ladder	Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media	: Protein 80 Gel Matrix	None known.
	Protein 80 Dye Concentrate	None known.
	Protein 80 Sample Buffer	None known.
	Protein 80 Ladder	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: Protein 80 Gel Matrix	In a fire or if heated, a pressure increase will occur and the container may burst.
	Protein 80 Dye Concentrate	In a fire or if heated, a pressure increase will occur and the container may burst.
	Protein 80 Sample Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	Protein 80 Ladder	In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products	: Protein 80 Gel Matrix	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	Protein 80 Dye Concentrate	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides metal oxide/oxides
	Protein 80 Sample Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
	Protein 80 Ladder	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides

5.3 Advice for firefighters

Special precautions for fire-fighters	: Protein 80 Gel Matrix	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Protein 80 Dye Concentrate	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Protein 80 Sample Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

SECTION 5: Firefighting measures

Special protective equipment for fire-fighters

Protein 80 Ladder		Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
: Protein 80 Gel Matrix		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Protein 80 Dye Concentrate		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Protein 80 Sample Buffer		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Protein 80 Ladder		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: Protein 80 Gel Matrix		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Protein 80 Dye Concentrate		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Protein 80 Sample Buffer		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Protein 80 Ladder		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

For emergency responders

: Protein 80 Gel Matrix		If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Protein 80 Dye Concentrate		If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Protein 80 Sample Buffer		If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

SECTION 6: Accidental release measures

Protein 80 Ladder If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Protein 80 Gel Matrix Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Protein 80 Dye Concentrate Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Protein 80 Sample Buffer Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Protein 80 Ladder Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Protein 80 Gel Matrix Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Protein 80 Dye Concentrate Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Protein 80 Sample Buffer Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Protein 80 Ladder Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures : Protein 80 Gel Matrix Put on appropriate personal protective equipment (see Section 8).

Protein 80 Dye Concentrate Put on appropriate personal protective equipment (see Section 8).

Protein 80 Sample Buffer Put on appropriate personal protective equipment (see Section 8).

Protein 80 Ladder Put on appropriate personal protective equipment (see Section 8).

SECTION 7: Handling and storage

Advice on general occupational hygiene

: Protein 80 Gel Matrix	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Protein 80 Dye Concentrate	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Protein 80 Sample Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Protein 80 Ladder	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage

: Protein 80 Gel Matrix	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Protein 80 Dye Concentrate	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Protein 80 Sample Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Protein 80 Ladder	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use

SECTION 7: Handling and storage

appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations	: Protein 80 Gel Matrix	Industrial applications, Professional applications.
	Protein 80 Dye Concentrate	Industrial applications, Professional applications.
	Protein 80 Sample Buffer	Industrial applications, Professional applications.
	Protein 80 Ladder	Industrial applications, Professional applications.
Industrial sector specific solutions	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	Protein 80 Sample Buffer	Not available.
	Protein 80 Ladder	Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Protein 80 Ladder Glycerol	NAOSH (Ireland, 5/2021). Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV-8hr: 10 mg/m ³ 8 hours. Form: mist

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures	: Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
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DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Protein 80 Gel Matrix Trometamol	DNEL	Long term Oral	8.3 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	29 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	83.3 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	117.5 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	166.7 mg/kg bw/day	Workers	Systemic
Protein 80 Dye Concentrate Sodium dodecyl sulphate	DNEL	Long term Oral	24 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	85 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	285 mg/m ³	Workers	Systemic

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Protein 80 Sample Buffer Lithium dodecyl sulphate	DNEL	Long term Dermal	2440 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	4060 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	2.26 mg/m ³	General population	Systemic	
	DNEL	Long term Oral	2.6 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	7.6 mg/m ³	Workers	Systemic	
	Trometamol	DNEL	Long term Dermal	260 mg/kg bw/day	General population	Systemic
		DNEL	Long term Dermal	433.3 mg/kg bw/day	Workers	Systemic
		DNEL	Long term Oral	8.3 mg/kg bw/day	General population	Systemic
		DNEL	Long term Inhalation	29 mg/m ³	General population	Systemic
		DNEL	Long term Dermal	83.3 mg/kg bw/day	General population	Systemic
DNEL		Long term Inhalation	117.5 mg/m ³	Workers	Systemic	
DNEL		Long term Dermal	166.7 mg/kg bw/day	Workers	Systemic	
Protein 80 Ladder Trometamol		DNEL	Long term Oral	8.3 mg/kg bw/day	General population	Systemic
		DNEL	Long term Inhalation	29 mg/m ³	General population	Systemic
		DNEL	Long term Dermal	83.3 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	117.5 mg/m ³	Workers	Systemic	
	DNEL	Long term Dermal	166.7 mg/kg bw/day	Workers	Systemic	
Lithium dodecyl sulphate	DNEL	Long term Inhalation	2.26 mg/m ³	General population	Systemic	
	DNEL	Long term Oral	2.6 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	7.6 mg/m ³	Workers	Systemic	
	DNEL	Long term Dermal	260 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	433.3 mg/kg bw/day	Workers	Systemic	

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 8: Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Protein 80 Gel Matrix	Liquid.
	Protein 80 Dye Concentrate	Liquid.
	Protein 80 Sample Buffer	Liquid.
	Protein 80 Ladder	Liquid.
Colour	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Blue.
	Protein 80 Sample Buffer	Not available.
	Protein 80 Ladder	Not available.
Odour	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	Protein 80 Sample Buffer	Not available.
	Protein 80 Ladder	Not available.
Odour threshold	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	Protein 80 Sample Buffer	Not available.
	Protein 80 Ladder	Not available.
Melting point/freezing point	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	Protein 80 Sample Buffer	0°C
	Protein 80 Ladder	Not available.
Initial boiling point and boiling range	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	Protein 80 Sample Buffer	100°C
	Protein 80 Ladder	Not available.

SECTION 9: Physical and chemical properties

- Flammability** : Protein 80 Gel Matrix Not applicable.
 Protein 80 Dye Not applicable.
 Concentrate
 Protein 80 Sample Buffer Not applicable.
 Protein 80 Ladder Not applicable.
- Upper/lower flammability or explosive limits** : Protein 80 Gel Matrix Not available.
 Protein 80 Dye Not available.
 Concentrate
 Protein 80 Sample Buffer Not available.
 Protein 80 Ladder Not available.
- Flash point** : Protein 80 Gel Matrix Not available.
 Protein 80 Dye Closed cup: 93°C
 Concentrate
 Protein 80 Sample Buffer Not available.
 Protein 80 Ladder Not available.

Ingredient name	Closed cup		Open cup	
	°C	Method	°C	Method
Protein 80 Ladder				
glycerol	-	-	177	-

Auto-ignition temperature :

Ingredient name	°C	Method
Protein 80 Dye Concentrate		
dimethyl sulfoxide	300 to 302	-
sodium dodecyl sulphate	310.5	VDI 2263
Protein 80 Sample Buffer		
lithium dodecyl sulphate	366	-
Protein 80 Ladder		
lithium dodecyl sulphate	366	-
glycerol	370	-

- Decomposition temperature** : Protein 80 Gel Matrix Not available.
 Protein 80 Dye Not available.
 Concentrate
 Protein 80 Sample Buffer Not available.
 Protein 80 Ladder Not available.

- pH** : Protein 80 Gel Matrix Not available.
 Protein 80 Dye Not available.
 Concentrate
 Protein 80 Sample Buffer Not available.
 Protein 80 Ladder Not available.

- Viscosity** : Protein 80 Gel Matrix Not available.
 Protein 80 Dye Not available.
 Concentrate
 Protein 80 Sample Buffer Not available.
 Protein 80 Ladder Not available.

SECTION 9: Physical and chemical properties

Solubility(ies)	Media	Result
	Protein 80 Gel Matrix water	Soluble
	Protein 80 Dye Concentrate water	Soluble
	Protein 80 Sample Buffer water	Soluble
	Protein 80 Ladder water	Soluble

Partition coefficient: n-octanol/water	Protein 80 Gel Matrix	Not applicable.
	Protein 80 Dye Concentrate	Not applicable.
	Protein 80 Sample Buffer	Not applicable.
	Protein 80 Ladder	Not applicable.

Vapour pressure	Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	Protein 80 Gel Matrix water	17.5	2.3	-	92.258	12.3	-
	trometamol	<0.00075006	<0.0001	-	-	-	-
	Protein 80 Dye Concentrate dimethyl sulfoxide	0.42	0.056	EU A.4	-	-	-
	sodium dodecyl sulphate	≤0.0013501	≤0.00018	-	-	-	-
	Protein 80 Sample Buffer water	17.5	2.3	-	92.258	12.3	-
	lithium dodecyl sulphate	0.049	0.0065	-	-	-	-
	Protein 80 Ladder water	17.5	2.3	-	92.258	12.3	-
	lithium dodecyl sulphate	0.049	0.0065	-	-	-	-

Evaporation rate	Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	Protein 80 Sample Buffer	Not available.
	Protein 80 Ladder	Not available.

Relative density	Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	Protein 80 Sample Buffer	Not available.
	Protein 80 Ladder	Not available.

SECTION 9: Physical and chemical properties

Vapour density	:	Protein 80 Gel Matrix	Not available.
		Protein 80 Dye Concentrate	Not available.
		Protein 80 Sample Buffer	Not available.
		Protein 80 Ladder	Not available.
Explosive properties	:	Protein 80 Gel Matrix	Not available.
		Protein 80 Dye Concentrate	Not available.
		Protein 80 Sample Buffer	Not available.
		Protein 80 Ladder	Not available.
Oxidising properties	:	Protein 80 Gel Matrix	Not available.
		Protein 80 Dye Concentrate	Not available.
		Protein 80 Sample Buffer	Not available.
		Protein 80 Ladder	Not available.

Particle characteristics

Median particle size	:	Protein 80 Gel Matrix	Not applicable.
		Protein 80 Dye Concentrate	Not applicable.
		Protein 80 Sample Buffer	Not applicable.
		Protein 80 Ladder	Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	Protein 80 Gel Matrix	No specific test data related to reactivity available for this product or its ingredients.
		Protein 80 Dye Concentrate	No specific test data related to reactivity available for this product or its ingredients.
		Protein 80 Sample Buffer	No specific test data related to reactivity available for this product or its ingredients.
		Protein 80 Ladder	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	Protein 80 Gel Matrix	The product is stable.
		Protein 80 Dye Concentrate	The product is stable.
		Protein 80 Sample Buffer	The product is stable.
		Protein 80 Ladder	The product is stable.
10.3 Possibility of hazardous reactions	:	Protein 80 Gel Matrix	Under normal conditions of storage and use, hazardous reactions will not occur.
		Protein 80 Dye Concentrate	Under normal conditions of storage and use, hazardous reactions will not occur.
		Protein 80 Sample Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
		Protein 80 Ladder	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	Protein 80 Gel Matrix	No specific data.
		Protein 80 Dye Concentrate	No specific data.
		Protein 80 Sample Buffer	No specific data.
		Protein 80 Ladder	No specific data.

SECTION 10: Stability and reactivity

10.5 Incompatible materials : Protein 80 Gel Matrix May react or be incompatible with oxidising materials.
 Protein 80 Dye Concentrate May react or be incompatible with oxidising materials.
 Protein 80 Sample Buffer May react or be incompatible with oxidising materials.
 Protein 80 Ladder May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products : Protein 80 Gel Matrix Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Protein 80 Dye Concentrate Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Protein 80 Sample Buffer Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Protein 80 Ladder Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Protein 80 Gel Matrix Trometamol	LD50 Dermal	Rat	>5000 mg/kg	-
Protein 80 Dye Concentrate Sodium dodecyl sulphate	LD50 Oral	Rat	1288 mg/kg	-
Protein 80 Sample Buffer Lithium dodecyl sulphate Trometamol	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rat	>5000 mg/kg	-
Protein 80 Ladder Trometamol Lithium dodecyl sulphate	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Protein 80 Dye Concentrate Protein 80 Dye Concentrate Sodium dodecyl sulphate	20188.1	N/A	N/A	N/A	23.5
	1288	N/A	N/A	N/A	1.5
Protein 80 Sample Buffer Protein 80 Sample Buffer Lithium dodecyl sulphate	16667.0	N/A	N/A	N/A	50.0
	500	N/A	N/A	N/A	1.5
Protein 80 Ladder Protein 80 Ladder Lithium dodecyl sulphate	50003.8	N/A	N/A	N/A	129.3
	500	N/A	N/A	N/A	1.5

Irritation/Corrosion

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Protein 80 Gel Matrix Trometamol	Skin - Moderate irritant	Rabbit	-	25 %	-
	Skin - Severe irritant	Rabbit	-	500 mg	-
Protein 80 Dye Concentrate Sodium dodecyl sulphate	Eyes - Mild irritant	Rabbit	-	250 ug	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Mild irritant	Guinea pig	-	24 hours 25 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 50 mg	-
	Skin - Moderate irritant	Mouse	-	24 hours 25 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 25 mg	-
Protein 80 Sample Buffer Trometamol	Skin - Moderate irritant	Rabbit	-	25 %	-
	Skin - Severe irritant	Rabbit	-	500 mg	-
Protein 80 Ladder Trometamol	Skin - Moderate irritant	Rabbit	-	25 %	-
	Skin - Severe irritant	Rabbit	-	500 mg	-

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Protein 80 Dye Concentrate Sodium dodecyl sulphate	Category 3	-	Respiratory tract irritation
Protein 80 Sample Buffer Lithium dodecyl sulphate	Category 3	-	Respiratory tract irritation
Protein 80 Ladder Lithium dodecyl sulphate	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

SECTION 11: Toxicological information

Information on likely routes of exposure	: Protein 80 Gel Matrix	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Protein 80 Dye Concentrate	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Protein 80 Sample Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Protein 80 Ladder	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Inhalation	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	Protein 80 Sample Buffer	No known significant effects or critical hazards.
	Protein 80 Ladder	No known significant effects or critical hazards.
Ingestion	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	Protein 80 Sample Buffer	No known significant effects or critical hazards.
	Protein 80 Ladder	No known significant effects or critical hazards.
Skin contact	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	Protein 80 Sample Buffer	No known significant effects or critical hazards.
	Protein 80 Ladder	No known significant effects or critical hazards.
Eye contact	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	Protein 80 Sample Buffer	No known significant effects or critical hazards.
	Protein 80 Ladder	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: Protein 80 Gel Matrix	No specific data.
	Protein 80 Dye Concentrate	No specific data.
	Protein 80 Sample Buffer	No specific data.
	Protein 80 Ladder	No specific data.
Ingestion	: Protein 80 Gel Matrix	No specific data.
	Protein 80 Dye Concentrate	No specific data.
	Protein 80 Sample Buffer	No specific data.
	Protein 80 Ladder	No specific data.
Skin contact	: Protein 80 Gel Matrix	No specific data.
	Protein 80 Dye Concentrate	No specific data.
	Protein 80 Sample Buffer	No specific data.
	Protein 80 Ladder	No specific data.
Eye contact	: Protein 80 Gel Matrix	No specific data.
	Protein 80 Dye Concentrate	No specific data.
	Protein 80 Sample Buffer	No specific data.
	Protein 80 Ladder	No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Short term exposure**

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

SECTION 11: Toxicological information

Potential chronic health effects

Conclusion/Summary	: Not available.	
General	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	: Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	: Protein 80 Sample Buffer	No known significant effects or critical hazards.
	: Protein 80 Ladder	No known significant effects or critical hazards.
Carcinogenicity	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	: Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	: Protein 80 Sample Buffer	No known significant effects or critical hazards.
	: Protein 80 Ladder	No known significant effects or critical hazards.
Mutagenicity	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	: Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	: Protein 80 Sample Buffer	No known significant effects or critical hazards.
	: Protein 80 Ladder	No known significant effects or critical hazards.
Reproductive toxicity	: Protein 80 Gel Matrix	No known significant effects or critical hazards.
	: Protein 80 Dye Concentrate	No known significant effects or critical hazards.
	: Protein 80 Sample Buffer	No known significant effects or critical hazards.
	: Protein 80 Ladder	No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Protein 80 Ladder Adverse symptoms may include the following: May cause skin sensitisation.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Protein 80 Gel Matrix Trometamol	Acute EC50 >980 mg/l Fresh water	Daphnia	48 hours
	Acute NOEC 520 mg/l Fresh water	Daphnia	48 hours
Protein 80 Dye Concentrate Sodium dodecyl sulphate	Acute EC50 1200 µg/l Marine water	Algae - <i>Skeletonema costatum</i>	96 hours
	Acute LC50 900 µg/l Marine water	Crustaceans - <i>Artemia salina</i> - Adult	48 hours
	Acute LC50 1400 µg/l Fresh water	Daphnia - <i>Daphnia pulex</i> - Neonate	48 hours
	Acute LC50 590 µg/l Fresh water	Fish - <i>Cirrhinus mrigala</i> - Larvae	96 hours
	Chronic NOEC 1.25 mg/l Marine water	Algae - <i>Ulva fasciata</i> - Zoea	96 hours
	Chronic NOEC 1 mg/l Fresh water	Crustaceans - <i>Pseudosida ramosa</i> - Neonate	21 days
	Chronic NOEC 3.2 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	21 days
Protein 80 Sample Buffer Trometamol	Chronic NOEC 0.8 mg/l Fresh water	Fish - <i>Gambusia holbrooki</i>	28 days
	Acute EC50 >980 mg/l Fresh water	Daphnia	48 hours
Protein 80 Ladder Trometamol	Acute NOEC 520 mg/l Fresh water	Daphnia	48 hours
	Acute EC50 >980 mg/l Fresh water	Daphnia	48 hours

SECTION 12: Ecological information

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Protein 80 Gel Matrix Trometamol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	97.1 % - Readily - 28 days	30 mg/l	-
Protein 80 Dye Concentrate Sodium dodecyl sulphate	OECD 301B Ready Biodegradability - CO2 Evolution Test	95 % - Readily - 28 days	20 mg/l	-
Protein 80 Sample Buffer Trometamol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	97.1 % - Readily - 28 days	30 mg/l	-
Protein 80 Ladder Trometamol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	97.1 % - Readily - 28 days	30 mg/l	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Protein 80 Gel Matrix Trometamol	-	-	Readily
Protein 80 Dye Concentrate Sodium dodecyl sulphate	-	-	Readily
Protein 80 Sample Buffer Lithium dodecyl sulphate Trometamol	- -	- -	Readily Readily
Protein 80 Ladder Trometamol Lithium dodecyl sulphate	- -	- -	Readily Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Protein 80 Gel Matrix Trometamol	-2.31	-	Low
Protein 80 Dye Concentrate Sodium dodecyl sulphate	-2.03	-	Low
Protein 80 Sample Buffer Trometamol	-2.31	-	Low

SECTION 12: Ecological information

Protein 80 Ladder Trometamol	-2.31	-	Low
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12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

SECTION 14: Transport information

Additional information

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

No listed substance

Label	:	Protein 80 Gel Matrix	Not applicable.
		Protein 80 Dye Concentrate	Not applicable.
		Protein 80 Sample Buffer	Not applicable.
		Protein 80 Ladder	Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Listed

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.


SECTION 15: Regulatory information

Inventory list

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Eurasian Economic Union	: Russian Federation inventory: Not determined.
Japan	: Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

 Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

Full text of abbreviated H statements

<p>Protein 80 Gel Matrix H315 H319</p> <p>Protein 80 Dye Concentrate H228 H302 H315 H318 H332 H335 H400 H412</p> <p>Protein 80 Sample Buffer H228 H302 H315</p>	<p>Causes skin irritation. Causes serious eye irritation.</p> <p>Flammable solid. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Harmful if inhaled. May cause respiratory irritation. Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.</p> <p>Flammable solid. Harmful if swallowed. Causes skin irritation.</p>
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SECTION 16: Other information

H318 H319 H332 H335 H412	Causes serious eye damage. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.
Protein 80 Ladder H228 H302 H315 H318 H319 H332 H335 H412	Flammable solid. Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.

[Full text of classifications \[CLP/GHS\]](#)

Protein 80 Gel Matrix Eye Irrit. 2 Skin Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2
Protein 80 Dye Concentrate Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 3 Eye Dam. 1 Flam. Sol. 2 Skin Irrit. 2 STOT SE 3	ACUTE TOXICITY - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 FLAMMABLE SOLIDS - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
Protein 80 Sample Buffer Acute Tox. 4 Aquatic Chronic 3 Eye Dam. 1 Eye Irrit. 2 Flam. Sol. 1 Skin Irrit. 2 STOT SE 3	ACUTE TOXICITY - Category 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE SOLIDS - Category 1 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
Protein 80 Ladder Acute Tox. 4 Aquatic Chronic 3 Eye Dam. 1 Eye Irrit. 2 Flam. Sol. 1 Skin Irrit. 2 STOT SE 3	ACUTE TOXICITY - Category 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE SOLIDS - Category 1 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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