

SAFETY DATA SHEET

Agilent Protein 80 Kit, Part Number 5067-1515

Section 1. Identification

1.1 Product identifier

Product name : Agilent Protein 80 Kit, Part Number 5067-1515
Part No. (Chemical Kit) : 5067-1515
Part No. : Reagents P80 G2938-80025
 Protein 80 Gel Matrix Not available.
 Protein 80 Dye Concentrate Not available.
Reagents P80 frozen G2938-80040
 Protein 80 Sample Buffer Not available.
 Protein 80 Ladder Not available.
Validation date : 9/22/2017

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

Material uses : Analytical chemistry.
 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

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : Protein 80 Gel Matrix While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
 Protein 80 Dye Concentrate This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 Protein 80 Sample Buffer While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
 Protein 80 Ladder This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Section 2. Hazards identification

Protein 80 Dye Concentrate

H227 FLAMMABLE LIQUIDS - Category 4
 H319 EYE IRRITATION - Category 2A

Protein 80 Ladder

H319 EYE IRRITATION - Category 2A

Ingredients of unknown toxicity

: Protein 80 Gel Matrix	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 10 - 30% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30%
Protein 80 Dye Concentrate	Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10%
Protein 80 Sample Buffer	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
Protein 80 Ladder	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30%

2.2 GHS label elements

Hazard pictograms

: Protein 80 Dye Concentrate



Protein 80 Ladder



Signal word

: Protein 80 Gel Matrix
 Protein 80 Dye Concentrate
 Protein 80 Sample Buffer
 Protein 80 Ladder

No signal word.
 Warning
 No signal word.
 Warning

Hazard statements

: Protein 80 Gel Matrix
 Protein 80 Dye Concentrate

 Protein 80 Sample Buffer
 Protein 80 Ladder

No known significant effects or critical hazards.
 H227 - Combustible liquid.
 H319 - Causes serious eye irritation.
 No known significant effects or critical hazards.
 H319 - Causes serious eye irritation.

Precautionary statements

Prevention

: Protein 80 Gel Matrix
 Protein 80 Dye Concentrate

 Protein 80 Sample Buffer
 Protein 80 Ladder

Not applicable.
 P280 - Wear protective gloves. Wear eye or face protection.
 P210 - Keep away from flames and hot surfaces. -
 No smoking.
 P264 - Wash hands thoroughly after handling.
 Not applicable.
 P280 - Wear eye or face protection.
 P264 - Wash hands thoroughly after handling.

Section 2. Hazards identification

Response	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not applicable. P305 + P351 + P338 - 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 attention. Not applicable. P305 + P351 + P338 - 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 attention.
Storage	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not applicable. P403 - Store in a well-ventilated place. P235 - Keep cool. Not applicable. Not applicable.
Disposal	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable. Not applicable.
Supplemental label elements	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	None known. None known. None known. None known.
2.3 Other hazards		
Hazards not otherwise classified	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	None known. None known. None known. None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Mixture Mixture Mixture Mixture
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Ingredient name	%	CAS number
Protein 80 Gel Matrix Trometamol	≤3	77-86-1
Protein 80 Dye Concentrate Dimethyl sulfoxide Sodium dodecyl sulphate	≥90 <10	67-68-5 151-21-3
Protein 80 Sample Buffer Lithium dodecyl sulphate Trometamol	≤5 ≤3	2044-56-6 77-86-1
Protein 80 Ladder Glycerol	≥10 - ≤25	56-81-5

Section 3. Composition/information on ingredients

Trometamol	≤3	77-86-1
Lithium dodecyl sulphate	≤3	2044-56-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First aid measures

4.1 Description of necessary 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. Continue to rinse for at least 10 minutes. Get medical attention.

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. Continue to rinse for at least 10 minutes. Get medical attention.

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. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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. If not breathing, if breathing is irregular or if respiratory

Section 4. First aid measures

arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Protein 80 Gel Matrix

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protein 80 Sample Buffer

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

Section 4. First aid measures

Protein 80 Ladder

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

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

Over-exposure signs/symptoms

Eye contact	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No specific data. Adverse symptoms may include the following: pain or irritation watering redness No specific data. Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No specific data. No specific data. No specific data. No specific data.
Skin contact	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No specific data. No specific data. No specific data. No specific data.

Section 4. First aid measures

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 immediate medical attention and special treatment needed, if necessary

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.
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.
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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
		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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting 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 dry chemical, CO ₂ , water spray (fog) or foam.
		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	Do not use water jet.
		Protein 80 Sample Buffer	None known.
		Protein 80 Ladder	None known.

5.2 Special hazards arising from the substance or mixture

Section 5. Fire-fighting measures

Specific hazards arising from the chemical

- : Protein 80 Gel Matrix
- Protein 80 Dye Concentrate
- Protein 80 Sample Buffer
- Protein 80 Ladder

In a fire or if heated, a pressure increase will occur and the container may burst.
 Combustible liquid. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
 In a fire or if heated, a pressure increase will occur and the container may burst.
 In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products

- : Protein 80 Gel Matrix
- Protein 80 Dye Concentrate
- Protein 80 Sample Buffer
- Protein 80 Ladder

Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides
 Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 sulfur oxides
 metal oxide/oxides
 Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides
 sulfur oxides
 metal oxide/oxides
 Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides
 sulfur oxides
 metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters

- : Protein 80 Gel Matrix
- Protein 80 Dye Concentrate
- Protein 80 Sample Buffer
- 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.
 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
 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.
 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. Fire-fighting measures

Special protective equipment for fire-fighters	: 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.
	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.
	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.
	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.

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 spilled 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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 spilled 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: Protein 80 Gel Matrix	If specialized 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 specialized 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 Sample Buffer	If specialized 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 Ladder	If specialized 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 spilled 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 spilled 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 spilled 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 spilled 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 materials 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. Use spark-proof tools and explosion-proof equipment. 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.

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). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

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). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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.

Section 7. Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

: Protein 80 Gel Matrix

Storage temperature: 4°C (39.2°F). 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Protein 80 Dye Concentrate

Storage temperature: 4°C (39.2°F). Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Protein 80 Sample Buffer

Storage temperature: -20°C (-4°F). 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Protein 80 Ladder

Storage temperature: -20°C (-4°F). 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 unlabeled containers. Use 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
Protein 80 Dye Concentrate
Protein 80 Sample Buffer
Protein 80 Ladder

Industrial applications, Professional applications.
Industrial applications, Professional applications.
Industrial applications, Professional applications.
Industrial applications, Professional applications.

Section 7. Handling and storage

Industrial sector specific solutions	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not applicable. Not applicable. Not applicable. Not applicable.
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Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Protein 80 Gel Matrix Trometamol	None.
Protein 80 Dye Concentrate Dimethyl sulfoxide	AIHA WEEL (United States, 10/2011). TWA: 250 ppm 8 hours.
Sodium dodecyl sulphate	None.
Protein 80 Sample Buffer Lithium dodecyl sulphate Trometamol	None. None.
Protein 80 Ladder Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 6/2016). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
Trometamol	None.
Lithium dodecyl sulphate	None.

8.2 Exposure controls

Appropriate engineering controls

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

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.

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.

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: chemical splash goggles.

Skin protection

Section 8. Exposure controls/personal 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- 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.

Section 9. Physical and chemical properties

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.
Color	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Blue.
	Protein 80 Sample Buffer	Not available.
	Protein 80 Ladder	Not available.
Odor	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	Protein 80 Sample Buffer	Not available.
	Protein 80 Ladder	Not available.
Odor threshold	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	Protein 80 Sample Buffer	Not available.
	Protein 80 Ladder	Not available.
pH	: 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	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	Protein 80 Sample Buffer	0°C (32°F)
	Protein 80 Ladder	Not available.
Boiling point	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Not available.
	Protein 80 Sample Buffer	100°C (212°F)
	Protein 80 Ladder	Not available.
Flash point	: Protein 80 Gel Matrix	Not available.
	Protein 80 Dye Concentrate	Closed cup: 93°C (199.4°F)
	Protein 80 Sample Buffer	Not available.
	Protein 80 Ladder	Not available.

Section 9. Physical and chemical properties

Evaporation rate	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not available. Not available. Not available. Not available.
Flammability (solid, gas)	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not applicable. Not applicable. Not applicable. Not applicable.
Lower and upper explosive (flammable) limits	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not available. Not available. Not available. Not available.
Vapor pressure	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not available. Not available. Not available. Not available.
Vapor density	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not available. Not available. Not available. Not available.
Relative density	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not available. Not available. Not available. Not available.
Solubility	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not available. Not available. Not available. Not available.
Auto-ignition temperature	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not available. Not available. Not available. Not available.
Decomposition temperature	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not available. Not available. Not available. Not available.
Viscosity	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Not available. Not available. Not available. Not available.

Section 10. Stability and reactivity

10.1 Reactivity	<ul style="list-style-type: none"> : Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder 	<p>No specific test data related to reactivity available for this product or its ingredients.</p> <p>No specific test data related to reactivity available for this product or its ingredients.</p> <p>No specific test data related to reactivity available for this product or its ingredients.</p> <p>No specific test data related to reactivity available for this product or its ingredients.</p>
10.2 Chemical stability	<ul style="list-style-type: none"> : Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder 	<p>The product is stable.</p> <p>The product is stable.</p> <p>The product is stable.</p> <p>The product is stable.</p>
10.3 Possibility of hazardous reactions	<ul style="list-style-type: none"> : Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder 	<p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p>
10.4 Conditions to avoid	<ul style="list-style-type: none"> : Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder 	<p>No specific data.</p> <p>Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.</p> <p>No specific data.</p> <p>No specific data.</p>
10.5 Incompatible materials	<ul style="list-style-type: none"> : Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder 	<p>May react or be incompatible with oxidizing materials.</p> <p>Reactive or incompatible with the following materials: oxidizing materials</p> <p>May react or be incompatible with oxidizing materials.</p> <p>May react or be incompatible with oxidizing materials.</p>
10.6 Hazardous decomposition products	<ul style="list-style-type: none"> : Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder 	<p>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</p> <p>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</p> <p>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</p> <p>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</p>

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 LD50 Oral	Rat Rat	>5000 mg/kg 5000 mg/kg	- -
Protein 80 Dye Concentrate Dimethyl sulfoxide	LD50 Dermal LD50 Oral	Rat Rat	40000 mg/kg 14500 mg/kg	- -
Sodium dodecyl sulphate	LD50 Oral	Rat	1288 mg/kg	-
Protein 80 Sample Buffer Lithium dodecyl sulphate Trometamol	LD50 Oral LD50 Dermal LD50 Oral	Rat Rat Rat	>5000 mg/kg >5000 mg/kg 5000 mg/kg	- - -
Protein 80 Ladder Glycerol Trometamol	LD50 Oral LD50 Dermal LD50 Oral	Rat Rat Rat	12600 mg/kg >5000 mg/kg 5000 mg/kg	- - -
Lithium dodecyl sulphate	LD50 Oral	Rat	>5000 mg/kg	-

Irritation/Corrosion

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

Section 11. Toxicological information

				milligrams	
Protein 80 Ladder Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Trometamol	Skin - Moderate irritant	Rabbit	-	25 Percent	-
	Skin - Severe irritant	Rabbit	-	500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Protein 80 Gel Matrix Trometamol	Category 3	Not applicable.	Respiratory tract irritation
Protein 80 Dye Concentrate Sodium dodecyl sulphate	Category 3	Not applicable.	Respiratory tract irritation
Protein 80 Sample Buffer Lithium dodecyl sulphate	Category 3	Not applicable.	Respiratory tract irritation
Trometamol	Category 3	Not applicable.	Respiratory tract irritation
Protein 80 Ladder Trometamol	Category 3	Not applicable.	Respiratory tract irritation
Lithium dodecyl sulphate	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	Routes of entry anticipated: Oral, Dermal, Inhalation. Routes of entry anticipated: Oral, Dermal, Inhalation. Routes of entry anticipated: Oral, Dermal, Inhalation. Routes of entry anticipated: Oral, Dermal, Inhalation.
Potential acute health effects		
Eye contact	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No known significant effects or critical hazards. Causes serious eye irritation. No known significant effects or critical hazards. Causes serious eye irritation.
Inhalation	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No specific data. Adverse symptoms may include the following: pain or irritation watering redness No specific data. Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No specific data. No specific data. No specific data. No specific data.
Skin contact	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No specific data. No specific data. No specific data. No specific data.
Ingestion	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No specific data. No specific data. No specific data. No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

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Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: Protein 80 Gel Matrix Protein 80 Dye Concentrate Protein 80 Sample Buffer Protein 80 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Protein 80 Gel Matrix Oral	344827.6 mg/kg
Protein 80 Dye Concentrate Oral Inhalation (dusts and mists)	20188.1 mg/kg 23.51 mg/l
Protein 80 Sample Buffer Oral Inhalation (dusts and mists)	15713.7 mg/kg 50 mg/l
Protein 80 Ladder Oral Inhalation (dusts and mists)	44606.5 mg/kg 129.3 mg/l

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 Acute NOEC 520 mg/l Fresh water	Daphnia Daphnia	48 hours 48 hours
Protein 80 Dye Concentrate Dimethyl sulfoxide	Acute LC50 25000 ppm Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Sodium dodecyl sulphate	Acute LC50 34000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 100 µl/L Marine water	Algae - Ulva lactuca	72 hours
	Acute EC50 1200 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute LC50 900 µg/l Marine water	Crustaceans - Artemia salina - Adult	48 hours
	Acute LC50 1400 µg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 590 µg/l Fresh water	Fish - Cirrhinus mrigala - Larvae	96 hours
	Chronic NOEC 1.25 mg/l Marine water Chronic NOEC 1 mg/l Fresh water	Algae - Ulva fasciata - Zoea Crustaceans - Pseudosida ramosa - Neonate	96 hours 21 days
Chronic NOEC 3.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days	
Chronic NOEC >1357 µg/l Fresh water	Fish - Pimephales promelas	42 days	
Protein 80 Sample Buffer Trometamol	Acute EC50 >980 mg/l Fresh water Acute NOEC 520 mg/l Fresh water	Daphnia Daphnia	48 hours 48 hours
Protein 80 Ladder Glycerol Trometamol	Acute LC50 54000 mg/l Fresh water Acute EC50 >980 mg/l Fresh water Acute NOEC 520 mg/l Fresh water	Fish - Oncorhynchus mykiss Daphnia Daphnia	96 hours 48 hours 48 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Protein 80 Ladder Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Protein 80 Gel Matrix Trometamol	-1.56	-	low
Protein 80 Dye Concentrate Dimethyl sulfoxide	-1.35	3.16	low
Sodium dodecyl sulphate	-2.03	-	low
Protein 80 Sample Buffer			

Section 12. Ecological information

Trometamol	-1.56	-	low
Protein 80 Ladder			
Glycerol	-1.76	-	low
Trometamol	-1.56	-	low

12.4 Mobility in soil

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

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

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.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112 : Not listed

(b) Hazardous Air Pollutants (HAPs)

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Protein 80 Sample Buffer Sodium azide	≤0.1	Yes.	500	-	1000	-
Protein 80 Ladder Sodium azide	≤0.1	Yes.	500	-	1000	-

SARA 304 RQ : 30769230.8 lbs / 13969230.8 kg

SARA 311/312

Classification : Protein 80 Gel Matrix Not applicable.
 Protein 80 Dye Concentrate Fire hazard
 Immediate (acute) health hazard
 Protein 80 Sample Buffer Not applicable.
 Protein 80 Ladder Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Protein 80 Gel Matrix Trometamol	≤3	Yes.	No.	No.	Yes.	No.
Protein 80 Dye Concentrate Dimethyl sulfoxide	≥90	Yes.	No.	No.	Yes.	No.
Sodium dodecyl sulphate	<10	Yes.	No.	No.	Yes.	No.
Protein 80 Sample Buffer Lithium dodecyl sulphate	≤5	Yes.	No.	No.	Yes.	No.
Trometamol	≤3	Yes.	No.	No.	Yes.	No.
Protein 80 Ladder Glycerol	≥10 - ≤25	No.	No.	No.	Yes.	No.
Trometamol	≤3	Yes.	No.	No.	Yes.	No.
Lithium dodecyl sulphate	≤3	Yes.	No.	No.	Yes.	No.

Section 15. Regulatory information

State regulations

- Massachusetts** : The following components are listed: GLYCERINE MIST
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL; DIMETHYL SULFOXIDE; METHANE, SULFINYLBIS-
- Pennsylvania** : The following components are listed: 1,2,3-PROPANETRIOL

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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.

Inventory list

- Australia** : Not determined.
- Canada** : Not determined.
- China** : Not determined.
- Europe** : Not determined.
- Japan** : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.
- Malaysia** : 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.

Section 16. Other information

History

- Date of issue** : 09/22/2017
- Date of previous issue** : 01/28/2016.
- Version** : 5

Indicates information that has changed from previously issued version.

Notice to reader

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