

SAFETY DATA SHEET



Agilent High Sensitivity Protein 250 Kit, Part Number 5067-1575

Section 1. Identification

Product identifier	: Agilent High Sensitivity Protein 250 Kit, Part Number 5067-1575
Part no. (chemical kit)	: 5067-1575
Part no.	: <input checked="" type="checkbox"/> <u>High Sensitivity Protein Labeling Dye</u> G2938-85002
	High Sensitivity Protein 250 Labeling Dye Not available.
	<u>High Sensitivity Protein Labeling Reagents</u> G2938-85001
	Protein 250 DMSO Not available.
	10 x Protein 250 Labeling Buffer Not available.
	Protein 250 Ethanolamine Not available.
	<u>High Sensitivity Protein Reagents</u> G2938-85000
	Protein 250 Destain Solution Not available.
	Protein 250 Gel Matrix Not available.
	Protein 250 Sample Buffer Not available.
	<u>High Sensitivity Protein Ladder</u> G2938-85003
	Protein 250 Ladder Not available.

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

Identified uses	: <input checked="" type="checkbox"/> Analytical chemistry. Research and Development
	<input checked="" type="checkbox"/> <u>High Sensitivity Protein 250 Labeling Dye</u> 1 x 0.018 mg
	Protein 250 DMSO 1 x 0.1 ml
	10 x Protein 250 Labeling Buffer 1 x 1 ml
	Protein 250 Ethanolamine 1 x 0.1 ml
	Protein 250 Destain Solution 1 x 0.150 ml
	Protein 250 Gel Matrix 1 x 0.6 ml
	Protein 250 Sample Buffer 3 x 0.1 ml
	Protein 250 Ladder 1 x 0.018 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

High Sensitivity Protein 250 Labeling Dye

H318 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1

Protein 250 DMSO

H227 FLAMMABLE LIQUIDS - Category 4
H320 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B

Protein 250 Destain Solution

H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

Protein 250 Gel Matrix

H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

Section 2. Hazard(s) identification

Protein 250 Ladder H320

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B

Protein 250 Destain Solution	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 4.5%
Protein 250 Gel Matrix	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 4.5%

GHS label elements

Hazard pictograms

High Sensitivity Protein 250 Labeling Dye	
Protein 250 Destain Solution	
Protein 250 Gel Matrix	

Signal word

High Sensitivity Protein 250 Labeling Dye	DANGER
Protein 250 DMSO	WARNING
10 x Protein 250 Labeling Buffer	No signal word.
Protein 250 Ethanolamine	No signal word.
Protein 250 Destain Solution	WARNING
Protein 250 Gel Matrix	WARNING
Protein 250 Sample Buffer	No signal word.
Protein 250 Ladder	WARNING

Hazard statements

High Sensitivity Protein 250 Labeling Dye	H318 - Causes serious eye damage.
Protein 250 DMSO	H227 - Combustible liquid. H320 - Causes eye irritation.
10 x Protein 250 Labeling Buffer	No known significant effects or critical hazards.
Protein 250 Ethanolamine	No known significant effects or critical hazards.
Protein 250 Destain Solution	H319 - Causes serious eye irritation.
Protein 250 Gel Matrix	H319 - Causes serious eye irritation.
Protein 250 Sample Buffer	No known significant effects or critical hazards.
Protein 250 Ladder	H320 - Causes eye irritation.

Precautionary statements

Prevention

High Sensitivity Protein 250 Labeling Dye	P280 - Wear eye or face protection.
Protein 250 DMSO	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
10 x Protein 250 Labeling Buffer	Not applicable.
Protein 250 Ethanolamine	Not applicable.
Protein 250 Destain Solution	P280 - Wear eye or face protection.
Protein 250 Gel Matrix	P280 - Wear eye or face protection.
Protein 250 Sample Buffer	Not applicable.
Protein 250 Ladder	Not applicable.

Section 2. Hazard(s) identification

Response	:	High Sensitivity Protein 250 Labeling Dye	P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
		Protein 250 DMSO	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 advice or attention.
		10 x Protein 250 Labeling Buffer	Not applicable.
		Protein 250 Ethanolamine Protein 250 Destain Solution	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 advice or attention.
		Protein 250 Gel Matrix	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 advice or attention.
		Protein 250 Sample Buffer Protein 250 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 advice or attention.
Storage	:	High Sensitivity Protein 250 Labeling Dye	Not applicable.
		Protein 250 DMSO	Not applicable.
		10 x Protein 250 Labeling Buffer	Not applicable.
		Protein 250 Ethanolamine	Not applicable.
		Protein 250 Destain Solution	Not applicable.
		Protein 250 Gel Matrix	Not applicable.
		Protein 250 Sample Buffer Protein 250 Ladder	Not applicable. Not applicable.
Disposal	:	High Sensitivity Protein 250 Labeling Dye	Not applicable.
		Protein 250 DMSO	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		10 x Protein 250 Labeling Buffer	Not applicable.
		Protein 250 Ethanolamine	Not applicable.
		Protein 250 Destain Solution	Not applicable.
		Protein 250 Gel Matrix	Not applicable.
		Protein 250 Sample Buffer	Not applicable.
		Protein 250 Ladder	Not applicable.
Supplemental label elements			
Additional warning phrases	:	High Sensitivity Protein 250 Labeling Dye	Not applicable.
		Protein 250 DMSO	Not applicable.
		10 x Protein 250 Labeling Buffer	Not applicable.
		Protein 250 Ethanolamine	Not applicable.
		Protein 250 Destain Solution	Not applicable.
		Protein 250 Gel Matrix	Not applicable.
		Protein 250 Sample Buffer Protein 250 Ladder	Not applicable. Not applicable.

Section 2. Hazard(s) identification

Other hazards which do not result in classification	High Sensitivity Protein 250 Labeling Dye	None known.
	Protein 250 DMSO	None known.
	10 x Protein 250 Labeling Buffer	None known.
	Protein 250 Ethanolamine	None known.
	Protein 250 Destain Solution	None known.
	Protein 250 Gel Matrix	None known.
	Protein 250 Sample Buffer	None known.
	Protein 250 Ladder	None known.

Section 3. Composition and ingredient information

Substance/mixture	High Sensitivity Protein 250 Labeling Dye	Substance
	Protein 250 DMSO	Substance
	10 x Protein 250 Labeling Buffer	Mixture
	Protein 250 Ethanolamine	Mixture
	Protein 250 Destain Solution	Mixture
	Protein 250 Gel Matrix	Mixture
	Protein 250 Sample Buffer	Mixture
	Protein 250 Ladder	Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
High Sensitivity Protein 250 Labeling Dye 3H-Indolium, 2-[3-[7-(diethylamino)-2-(1,1-dimethylethyl)-4H-1-benzopyran-4-ylidene]-1-propen-1-yl]-3-[4-[(2,5-dioxo-1-pyrrolidinyl)oxy]-4-oxobutyl]-3-methyl-5-sulfo-1-(3-sulfopropyl)-, inner salt, sodium salt (1:1)	100	704891-70-3
Protein 250 DMSO Dimethyl sulfoxide	100	67-68-5
Protein 250 Destain Solution Sodium dodecyl sulphate	≤2.4	151-21-3
Protein 250 Gel Matrix Sodium dodecyl sulphate	≤2.4	151-21-3
Protein 250 Ladder Glycerol	≥10 - ≤30	56-81-5

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

The total concentration of ingredients in this product, reported or not in this section, is 100%.

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: High Sensitivity Protein 250 Labeling Dye	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
	Protein 250 DMSO	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. If irritation persists, get medical attention.
	10 x Protein 250 Labeling 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 250 Ethanolamine	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 250 Destain Solution	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 250 Gel Matrix	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 250 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 250 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. If irritation persists, get medical attention.
Inhalation	: High Sensitivity Protein 250 Labeling Dye	Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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.
	Protein 250 DMSO	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

Section 4. First aid measures

	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.
10 x Protein 250 Labeling 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 250 Ethanolamine	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Protein 250 Destain Solution	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. 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 250 Gel Matrix	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. 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 250 Sample Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Protein 250 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 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.

Section 4. First aid measures

Skin contact

: High Sensitivity Protein 250 Labeling Dye	Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. 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 250 DMSO	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.
10 x Protein 250 Labeling Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Protein 250 Ethanolamine	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Protein 250 Destain Solution	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 250 Gel Matrix	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 250 Sample Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Protein 250 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

: High Sensitivity Protein 250 Labeling Dye	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. 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. Chemical burns must be treated promptly by a physician. 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 250 DMSO	Wash out mouth with water. Remove dentures if any. 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.
10 x Protein 250 Labeling	Wash out mouth with water. If material has been

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Buffer	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 250 Ethanolamine	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 250 Destain Solution	Wash out mouth with water. Remove dentures if any. 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 250 Gel Matrix	Wash out mouth with water. Remove dentures if any. 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 250 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 250 Ladder	Wash out mouth with water. Remove dentures if any. 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

Eye contact	:	High Sensitivity Protein 250 Labeling Dye	Causes serious eye damage.
		Protein 250 DMSO	Causes eye irritation.
		10 x Protein 250 Labeling Buffer	No known significant effects or critical hazards.
		Protein 250 Ethanolamine	No known significant effects or critical hazards.
		Protein 250 Destain Solution	Causes serious eye irritation.
		Protein 250 Gel Matrix	Causes serious eye irritation.
		Protein 250 Sample Buffer Protein 250 Ladder	No known significant effects or critical hazards. Causes eye irritation.
Inhalation	:	High Sensitivity Protein 250 Labeling Dye	No known significant effects or critical hazards.
		Protein 250 DMSO	No known significant effects or critical hazards.
		10 x Protein 250 Labeling Buffer	No known significant effects or critical hazards.
		Protein 250 Ethanolamine	No known significant effects or critical hazards.
		Protein 250 Destain Solution	No known significant effects or critical hazards.
		Protein 250 Gel Matrix	No known significant effects or critical hazards.
		Protein 250 Sample Buffer Protein 250 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	:	High Sensitivity Protein 250 Labeling Dye	No known significant effects or critical hazards.
		Protein 250 DMSO	No known significant effects or critical hazards.
		10 x Protein 250 Labeling Buffer	No known significant effects or critical hazards.
		Protein 250 Ethanolamine	No known significant effects or critical hazards.
		Protein 250 Destain Solution	No known significant effects or critical hazards.
		Protein 250 Gel Matrix	No known significant effects or critical hazards.
		Protein 250 Sample Buffer Protein 250 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	:	High Sensitivity Protein 250 Labeling Dye	No known significant effects or critical hazards.
		Protein 250 DMSO	No known significant effects or critical hazards.
		10 x Protein 250 Labeling Buffer	No known significant effects or critical hazards.
		Protein 250 Ethanolamine	No known significant effects or critical hazards.
		Protein 250 Destain Solution	No known significant effects or critical hazards.
		Protein 250 Gel Matrix	No known significant effects or critical hazards.
		Protein 250 Sample Buffer Protein 250 Ladder	No known significant effects or critical hazards. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	High Sensitivity Protein 250 Labeling Dye	Adverse symptoms may include the following: pain watering redness
		Protein 250 DMSO	Adverse symptoms may include the following: irritation watering redness
		10 x Protein 250 Labeling Buffer	No specific data.
		Protein 250 Ethanolamine	No specific data.
		Protein 250 Destain Solution	Adverse symptoms may include the following: pain or irritation watering redness
		Protein 250 Gel Matrix	Adverse symptoms may include the following: pain or irritation watering redness
		Protein 250 Sample Buffer	No specific data.

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	Protein 250 Ladder	Adverse symptoms may include the following: irritation watering redness
Inhalation	: High Sensitivity Protein 250 Labeling Dye	No specific data.
	Protein 250 DMSO	No specific data.
	10 x Protein 250 Labeling Buffer	No specific data.
	Protein 250 Ethanolamine	No specific data.
	Protein 250 Destain Solution	No specific data.
	Protein 250 Gel Matrix	No specific data.
	Protein 250 Sample Buffer	No specific data.
	Protein 250 Ladder	No specific data.
Skin contact	: High Sensitivity Protein 250 Labeling Dye	Adverse symptoms may include the following: pain or irritation redness blistering may occur
	Protein 250 DMSO	No specific data.
	10 x Protein 250 Labeling Buffer	No specific data.
	Protein 250 Ethanolamine	No specific data.
	Protein 250 Destain Solution	No specific data.
	Protein 250 Gel Matrix	No specific data.
	Protein 250 Sample Buffer	No specific data.
	Protein 250 Ladder	No specific data.
Ingestion	: High Sensitivity Protein 250 Labeling Dye	Adverse symptoms may include the following: stomach pains
	Protein 250 DMSO	No specific data.
	10 x Protein 250 Labeling Buffer	No specific data.
	Protein 250 Ethanolamine	No specific data.
	Protein 250 Destain Solution	No specific data.
	Protein 250 Gel Matrix	No specific data.
	Protein 250 Sample Buffer	No specific data.
	Protein 250 Ladder	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: High Sensitivity Protein 250 Labeling Dye	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 250 DMSO	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	10 x Protein 250 Labeling 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 250 Ethanolamine	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Protein 250 Destain Solution	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 250 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

Section 4. First aid measures

	Protein 250 Sample Buffer	surveillance for 48 hours. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Protein 250 Ladder	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: High Sensitivity Protein 250 Labeling Dye	No specific treatment.
	Protein 250 DMSO	No specific treatment.
	10 x Protein 250 Labeling Buffer	No specific treatment.
	Protein 250 Ethanolamine	No specific treatment.
	Protein 250 Destain Solution	No specific treatment.
	Protein 250 Gel Matrix	No specific treatment.
	Protein 250 Sample Buffer	No specific treatment.
	Protein 250 Ladder	No specific treatment.
Protection of first-aiders	: High Sensitivity Protein 250 Labeling Dye	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	Protein 250 DMSO	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.
	10 x Protein 250 Labeling Buffer	No action shall be taken involving any personal risk or without suitable training.
	Protein 250 Ethanolamine	No action shall be taken involving any personal risk or without suitable training.
	Protein 250 Destain Solution	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 250 Gel Matrix	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 250 Sample Buffer	No action shall be taken involving any personal risk or without suitable training.
	Protein 250 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. Firefighting measures

Extinguishing media

Suitable extinguishing media	: High Sensitivity Protein 250 Labeling Dye	Use an extinguishing agent suitable for the surrounding fire.
	Protein 250 DMSO	Use dry chemical, CO ₂ , water spray (fog) or foam.
	10 x Protein 250 Labeling Buffer	Use an extinguishing agent suitable for the surrounding fire.
	Protein 250 Ethanolamine	Use an extinguishing agent suitable for the surrounding fire.
	Protein 250 Destain Solution	Use an extinguishing agent suitable for the surrounding fire.

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	Protein 250 Gel Matrix	Use an extinguishing agent suitable for the surrounding fire.	
	Protein 250 Sample Buffer	Use an extinguishing agent suitable for the surrounding fire.	
	Protein 250 Ladder	Use an extinguishing agent suitable for the surrounding fire.	
Unsuitable extinguishing media	: High Sensitivity Protein 250 Labeling Dye	None known.	
	Protein 250 DMSO	Do not use water jet.	
	10 x Protein 250 Labeling Buffer	None known.	
	Protein 250 Ethanolamine	None known.	
	Protein 250 Destain Solution	None known.	
	Protein 250 Gel Matrix	None known.	
	Protein 250 Sample Buffer	None known.	
	Protein 250 Ladder	None known.	
Specific hazards arising from the chemical	: High Sensitivity Protein 250 Labeling Dye	No specific fire or explosion hazard.	
	Protein 250 DMSO	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. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.	
	10 x Protein 250 Labeling Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.	
	Protein 250 Ethanolamine	In a fire or if heated, a pressure increase will occur and the container may burst.	
	Protein 250 Destain Solution	In a fire or if heated, a pressure increase will occur and the container may burst.	
	Protein 250 Gel Matrix	In a fire or if heated, a pressure increase will occur and the container may burst.	
	Protein 250 Sample Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.	
	Protein 250 Ladder	In a fire or if heated, a pressure increase will occur and the container may burst.	
	Hazardous thermal decomposition products	: High Sensitivity Protein 250 Labeling Dye	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
		Protein 250 DMSO	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
10 x Protein 250 Labeling Buffer		Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides	
Protein 250 Ethanolamine		No specific data.	
Protein 250 Destain Solution		Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides	

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	Protein 250 Gel Matrix	metal oxide/oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
	Protein 250 Sample Buffer Protein 250 Ladder	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	: High Sensitivity Protein 250 Labeling Dye	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 250 DMSO	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.
	10 x Protein 250 Labeling 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.
	Protein 250 Ethanolamine	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 250 Destain Solution	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 250 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 250 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.
Special protective equipment for fire-fighters	: High Sensitivity Protein 250 Labeling Dye	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 250 DMSO	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.
	10 x Protein 250 Labeling 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.
	Protein 250 Ethanolamine	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

Protein 250 Destain Solution	pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Protein 250 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 250 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 250 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

High Sensitivity Protein 250 Labeling Dye	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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Protein 250 DMSO	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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
10 x Protein 250 Labeling 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 250 Ethanolamine	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 250 Destain Solution	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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Protein 250 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

Section 6. Accidental release measures

		through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Protein 250 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 250 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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders :	High Sensitivity Protein 250 Labeling Dye	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 250 DMSO	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".
	10 x Protein 250 Labeling 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".
	Protein 250 Ethanolamine	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 250 Destain Solution	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 250 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 250 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".
	Protein 250 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".
Environmental precautions :	High Sensitivity Protein 250 Labeling Dye	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 250 DMSO	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).
	10 x Protein 250 Labeling Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 6. Accidental release measures

Protein 250 Ethanolamine	Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). 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 250 Destain Solution	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 250 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 250 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 250 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).

Methods and material for containment and cleaning up

Methods for cleaning up	: High Sensitivity Protein 250 Labeling Dye	Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Protein 250 DMSO		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.
10 x Protein 250 Labeling 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 250 Ethanolamine		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 250 Destain Solution		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 250 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

Section 6. Accidental release measures

Protein 250 Sample Buffer	inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. 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 250 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

Precautions for safe handling

Protective measures

High Sensitivity Protein 250 Labeling Dye	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.
Protein 250 DMSO	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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.
10 x Protein 250 Labeling Buffer	Put on appropriate personal protective equipment (see Section 8).
Protein 250 Ethanolamine	Put on appropriate personal protective equipment (see Section 8).
Protein 250 Destain Solution	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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.
Protein 250 Gel Matrix	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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

Section 7. Handling and storage

		reuse container.
	Protein 250 Sample Buffer	Put on appropriate personal protective equipment (see Section 8).
	Protein 250 Ladder	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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	: High Sensitivity Protein 250 Labeling Dye	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 250 DMSO	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.
	10 x Protein 250 Labeling 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 250 Ethanolamine	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 250 Destain Solution	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 250 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 250 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 250 Ladder	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : High Sensitivity Protein 250 Labeling Dye

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 250 DMSO

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. Store locked up. 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.

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

10 x Protein 250 Labeling 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 250 Ethanolamine

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 250 Destain Solution

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 250 Gel Matrix

Store in accordance with local regulations. Store in

Section 8. Exposure controls and personal protection

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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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. 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 and safety characteristics

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

Appearance

Physical state	: High Sensitivity Protein 250 Labeling Dye	Solid. [lyophilised]
	Protein 250 DMSO	Liquid.
	10 x Protein 250 Labeling Buffer	Liquid.
	Protein 250 Ethanolamine	Liquid.
	Protein 250 Destain Solution	Liquid.
	Protein 250 Gel Matrix	Liquid.
	Protein 250 Sample Buffer	Liquid.
	Protein 250 Ladder	Liquid.

Section 9. Physical and chemical properties and safety characteristics

Colour	:	High Sensitivity Protein 250 Labeling Dye	Not available.
		Protein 250 DMSO	Not available.
		10 x Protein 250 Labeling Buffer	Not available.
		Protein 250 Ethanolamine	Not available.
		Protein 250 Destain Solution	Not available.
		Protein 250 Gel Matrix	Not available.
		Protein 250 Sample Buffer	Not available.
		Protein 250 Ladder	Not available.
Odour	:	High Sensitivity Protein 250 Labeling Dye	Odourless.
		Protein 250 DMSO	Not available.
		10 x Protein 250 Labeling Buffer	Not available.
		Protein 250 Ethanolamine	Not available.
		Protein 250 Destain Solution	Not available.
		Protein 250 Gel Matrix	Not available.
		Protein 250 Sample Buffer	Not available.
		Protein 250 Ladder	Not available.
Odour threshold	:	High Sensitivity Protein 250 Labeling Dye	Not available.
		Protein 250 DMSO	Not available.
		10 x Protein 250 Labeling Buffer	Not available.
		Protein 250 Ethanolamine	Not available.
		Protein 250 Destain Solution	Not available.
		Protein 250 Gel Matrix	Not available.
		Protein 250 Sample Buffer	Not available.
		Protein 250 Ladder	Not available.
pH	:	High Sensitivity Protein 250 Labeling Dye	Not available.
		Protein 250 DMSO	Not available.
		10 x Protein 250 Labeling Buffer	8.6 to 8.9
		Protein 250 Ethanolamine	Not available.
		Protein 250 Destain Solution	Not available.
		Protein 250 Gel Matrix	Not available.
		Protein 250 Sample Buffer	Not available.
		Protein 250 Ladder	Not available.
Melting point/freezing point	:	High Sensitivity Protein 250 Labeling Dye	Not available.
		Protein 250 DMSO	18.5°C (65.3°F)
		10 x Protein 250 Labeling Buffer	0°C (32°F)
		Protein 250 Ethanolamine	0°C (32°F)
		Protein 250 Destain Solution	Not available.
		Protein 250 Gel Matrix	Not available.
		Protein 250 Sample Buffer	0°C (32°F)
		Protein 250 Ladder	Not available.
Boiling point, initial boiling point, and boiling range	:	High Sensitivity Protein 250 Labeling Dye	Not available.
		Protein 250 DMSO	189°C (372.2°F)
		10 x Protein 250 Labeling Buffer	100°C (212°F)
		Protein 250 Ethanolamine	100°C (212°F)
		Protein 250 Destain Solution	Not available.
		Protein 250 Gel Matrix	Not available.
		Protein 250 Sample Buffer	100°C (212°F)
		Protein 250 Ladder	Not available.

Section 9. Physical and chemical properties and safety characteristics

Flash point : High Sensitivity Protein 250 Labeling Dye Not applicable.
 Protein 250 DMSO Closed cup: 87°C (188.6°F)
 Open cup: 87°C (188.6°F)
 10 x Protein 250 Labeling Buffer Not available.
 Protein 250 Ethanolamine Not available.
 Protein 250 Destain Solution Not available.
 Protein 250 Gel Matrix Not available.
 Protein 250 Sample Buffer Not available.
 Protein 250 Ladder Not available.

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
Protein 250 Ladder						
Glycerol				177	350.6	

Evaporation rate : High Sensitivity Protein 250 Labeling Dye Not available.
 Protein 250 DMSO 0.026 (butyl acetate = 1)
 10 x Protein 250 Labeling Buffer Not available.
 Protein 250 Ethanolamine Not available.
 Protein 250 Destain Solution Not available.
 Protein 250 Gel Matrix Not available.
 Protein 250 Sample Buffer Not available.
 Protein 250 Ladder Not available.

Flammability : High Sensitivity Protein 250 Labeling Dye May be combustible at high temperature.
 Protein 250 DMSO Not applicable.
 10 x Protein 250 Labeling Buffer Not applicable.
 Protein 250 Ethanolamine Not applicable.
 Protein 250 Destain Solution Not applicable.
 Protein 250 Gel Matrix Not applicable.
 Protein 250 Sample Buffer Not applicable.
 Protein 250 Ladder Not applicable.

Lower and upper explosion limit/flammability limit : High Sensitivity Protein 250 Labeling Dye Not applicable.
 Protein 250 DMSO Lower: 2.6%
 Upper: 28.5%
 10 x Protein 250 Labeling Buffer Not available.
 Protein 250 Ethanolamine Not available.
 Protein 250 Destain Solution Not available.
 Protein 250 Gel Matrix Not available.
 Protein 250 Sample Buffer Not available.
 Protein 250 Ladder Not available.

Vapour pressure : High Sensitivity Protein 250 Labeling Dye Not available.
 Protein 250 DMSO 0.056 kPa (0.42 mm Hg)
 10 x Protein 250 Labeling Buffer Not available.
 Protein 250 Ethanolamine Not available.
 Protein 250 Destain Solution Not available.
 Protein 250 Gel Matrix Not available.
 Protein 250 Sample Buffer Not available.
 Protein 250 Ladder Not available.

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapour Pressure at 20 °C			Vapour pressure at 50 °C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
10 x Protein 250 Labeling Buffer						
water	23.8	3.2		92.258	12.3	
Trometamol	<0.00075006	<0.0001				
Protein 250 Ethanolamine						
water	23.8	3.2		92.258	12.3	
Protein 250 Destain Solution						
water	23.8	3.2		92.258	12.3	
Sodium dodecyl sulphate	≤0.0013501	≤0.00018				
Protein 250 Gel Matrix						
water	23.8	3.2		92.258	12.3	
Sodium dodecyl sulphate	≤0.0013501	≤0.00018				
Protein 250 Sample Buffer						
water	23.8	3.2		92.258	12.3	
Protein 250 Ladder						
water	23.8	3.2		92.258	12.3	
Glycerol	0.000075	0.00001		0.0025	0.00033	

Relative vapour density :

- High Sensitivity Protein 250 Labeling Dye Not applicable.
- Protein 250 DMSO 2.7 [Air = 1]
- 10 x Protein 250 Labeling Buffer Not available.
- Protein 250 Ethanolamine Not available.
- Protein 250 Destain Solution Not available.
- Protein 250 Gel Matrix Not available.
- Protein 250 Sample Buffer Not available.
- Protein 250 Ladder Not available.

Section 9. Physical and chemical properties and safety characteristics

Relative density	:	High Sensitivity Protein 250 Labeling Dye	Not available.
		Protein 250 DMSO	1.1
		10 x Protein 250 Labeling Buffer	Not available.
		Protein 250 Ethanolamine	Not available.
		Protein 250 Destain Solution	Not available.
		Protein 250 Gel Matrix	Not available.
		Protein 250 Sample Buffer	Not available.
		Protein 250 Ladder	Not available.

Solubility(ies)	:	Media	Result
		High Sensitivity Protein 250 Labeling Dye	
		water	Soluble
		methanol	Soluble
		Protein 250 DMSO	
		water	Soluble
		10 x Protein 250 Labeling Buffer	
		water	Soluble
		Protein 250 Ethanolamine	
		water	Soluble
		Protein 250 Destain Solution	
		water	Soluble
		Protein 250 Gel Matrix	
water	Soluble		
Protein 250 Sample Buffer			
water	Soluble		
Protein 250 Ladder			
water	Soluble		

Partition coefficient: n-octanol/water	:	High Sensitivity Protein 250 Labeling Dye	Not available.
		Protein 250 DMSO	-1.35
		10 x Protein 250 Labeling Buffer	Not applicable.
		Protein 250 Ethanolamine	Not applicable.
		Protein 250 Destain Solution	Not applicable.
		Protein 250 Gel Matrix	Not applicable.
		Protein 250 Sample Buffer	Not applicable.
		Protein 250 Ladder	Not applicable.

Auto-ignition temperature	:	High Sensitivity Protein 250 Labeling Dye	Not applicable.
		Protein 250 DMSO	300 to 302°C (572 to 575.6°F)
		10 x Protein 250 Labeling Buffer	Not available.
		Protein 250 Ethanolamine	Not available.
		Protein 250 Destain Solution	Not available.
		Protein 250 Gel Matrix	Not available.
		Protein 250 Sample Buffer	Not available.
		Protein 250 Ladder	Not available.

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	°C	°F	Method
Protein 250 Destain Solution			
Sodium dodecyl sulphate	310.5	590.9	VDI 2263
Protein 250 Gel Matrix			
Sodium dodecyl sulphate	310.5	590.9	VDI 2263
Protein 250 Ladder			
Glycerol	370	698	

Decomposition temperature : High Sensitivity Protein 250 Labeling Dye Not available.

Protein 250 DMSO Not available.
10 x Protein 250 Labeling Buffer Not available.

Protein 250 Ethanolamine Not available.
Protein 250 Destain Solution Not available.
Protein 250 Gel Matrix Not available.
Protein 250 Sample Buffer Not available.
Protein 250 Ladder Not available.

Viscosity : High Sensitivity Protein 250 Labeling Dye Not applicable.

Protein 250 DMSO Dynamic: 2.14 mPa·s (2.14 cP)
10 x Protein 250 Labeling Buffer Not available.

Protein 250 Ethanolamine Not available.
Protein 250 Destain Solution Not available.
Protein 250 Gel Matrix Not available.
Protein 250 Sample Buffer Not available.
Protein 250 Ladder Not available.

Particle characteristics

Median particle size : High Sensitivity Protein 250 Labeling Dye Not available.

Protein 250 DMSO Not applicable.
10 x Protein 250 Labeling Buffer Not applicable.

Protein 250 Ethanolamine Not applicable.
Protein 250 Destain Solution Not applicable.
Protein 250 Gel Matrix Not applicable.
Protein 250 Sample Buffer Not applicable.
Protein 250 Ladder Not applicable.

Section 10. Stability and reactivity

Reactivity : High Sensitivity Protein 250 Labeling Dye No specific test data related to reactivity available for this product or its ingredients.

Protein 250 DMSO No specific test data related to reactivity available for this product or its ingredients.

10 x Protein 250 Labeling Buffer No specific test data related to reactivity available for this product or its ingredients.

Protein 250 Ethanolamine No specific test data related to reactivity available for this product or its ingredients.

Protein 250 Destain Solution No specific test data related to reactivity available for this product or its ingredients.

Protein 250 Gel Matrix No specific test data related to reactivity available for this product or its ingredients.

Protein 250 Sample Buffer No specific test data related to reactivity available for

Section 10. Stability and reactivity

	Protein 250 Ladder	this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 Ladder	The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
Possibility of hazardous reactions	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 Ladder	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 Ladder	No specific data. Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas. No specific data. No specific data. No specific data. No specific data. No specific data.
Incompatible materials	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 Ladder	May react or be incompatible with oxidising materials. Reactive or incompatible with the following materials: oxidising materials May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.

Section 10. Stability and reactivity

Hazardous decomposition products	: High Sensitivity Protein 250 Labeling Dye	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Protein 250 DMSO	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10 x Protein 250 Labeling Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Protein 250 Ethanolamine	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Protein 250 Destain Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Protein 250 Gel Matrix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Protein 250 Sample Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Protein 250 Ladder	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Protein 250 DMSO Dimethyl sulfoxide	LD50 Dermal LD50 Oral	Rat Rat	40000 mg/kg 14500 mg/kg	- -
Protein 250 Destain Solution Sodium dodecyl sulphate	LD50 Oral	Rat	1288 mg/kg	-
Protein 250 Gel Matrix Sodium dodecyl sulphate	LD50 Oral	Rat	1288 mg/kg	-
Protein 250 Ladder Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Protein 250 DMSO Dimethyl sulfoxide	Eyes - Mild irritant Eyes - Mild irritant	Rabbit Rabbit	- -	100 mg 24 hours 500 mg	- -
	Skin - Mild irritant Skin - Mild irritant	Rabbit Rabbit	- -	100 mg 24 hours 500 mg	- -
Protein 250 Destain Solution Sodium dodecyl sulphate	Eyes - Mild irritant Eyes - Moderate irritant Eyes - Moderate irritant	Rabbit Rabbit Rabbit	- - -	250 ug 10 mg 24 hours 100 mg	- - -
	Skin - Mild irritant	Guinea pig	-	24 hours 25 mg	-

Section 11. Toxicological information

Protein 250 Gel Matrix Sodium dodecyl sulphate	Skin - Mild irritant	Rabbit	-	mg 24 hours 50	-
	Skin - Moderate irritant	Mouse	-	mg 24 hours 25	-
	Skin - Moderate irritant	Rabbit	-	mg 24 hours 25	-
	Eyes - Mild irritant	Rabbit	-	250 ug	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100	-
	Skin - Mild irritant	Guinea pig	-	mg 24 hours 25	-
	Skin - Mild irritant	Rabbit	-	mg 24 hours 50	-
	Skin - Moderate irritant	Mouse	-	mg 24 hours 25	-
	Skin - Moderate irritant	Rabbit	-	mg 24 hours 25	-
Protein 250 Ladder Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500	-
	Skin - Mild irritant	Rabbit	-	mg 24 hours 500	-

Sensitisation

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)

Name	Category	Route of exposure	Target organs
Protein 250 Destain Solution Sodium dodecyl sulphate	Category 3	-	Respiratory tract irritation
Protein 250 Gel Matrix Sodium 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	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
		Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
		Not available.
	Protein 250 Destain Solution	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
		Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Protein 250 Gel Matrix	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
Protein 250 Sample Buffer Protein 250 Ladder	Not available. Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.	

Potential acute health effects

Eye contact	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 Ladder	Causes serious eye damage.
		Causes eye irritation.
		No known significant effects or critical hazards.
		No known significant effects or critical hazards.
		Causes serious eye irritation.
		Causes serious eye irritation.
		No known significant effects or critical hazards. Causes eye irritation.

Inhalation	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 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.
		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	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 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.
		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	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 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.
		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

Section 11. Toxicological information

Eye contact	: High Sensitivity Protein 250 Labeling Dye	Adverse symptoms may include the following: pain watering redness
	Protein 250 DMSO	Adverse symptoms may include the following: irritation watering redness
	10 x Protein 250 Labeling Buffer	No specific data.
	Protein 250 Ethanolamine	No specific data.
	Protein 250 Destain Solution	Adverse symptoms may include the following: pain or irritation watering redness
	Protein 250 Gel Matrix	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	Protein 250 Sample Buffer	No specific data.
	Protein 250 Ladder	Adverse symptoms may include the following: irritation watering redness
	: High Sensitivity Protein 250 Labeling Dye	No specific data.
	Protein 250 DMSO	No specific data.
	10 x Protein 250 Labeling Buffer	No specific data.
	Protein 250 Ethanolamine	No specific data.
Skin contact	Protein 250 Destain Solution	No specific data.
	Protein 250 Gel Matrix	No specific data.
	Protein 250 Sample Buffer	No specific data.
	Protein 250 Ladder	No specific data.
	: High Sensitivity Protein 250 Labeling Dye	Adverse symptoms may include the following: pain or irritation redness blistering may occur
	Protein 250 DMSO	No specific data.
Ingestion	10 x Protein 250 Labeling Buffer	No specific data.
	Protein 250 Ethanolamine	No specific data.
	Protein 250 Destain Solution	No specific data.
	Protein 250 Gel Matrix	No specific data.
	Protein 250 Sample Buffer	No specific data.
	Protein 250 Ladder	No specific data.
: High Sensitivity Protein 250 Labeling Dye	Adverse symptoms may include the following: stomach pains	
Protein 250 DMSO	No specific data.	
10 x Protein 250 Labeling Buffer	No specific data.	
Protein 250 Ethanolamine	No specific data.	
Protein 250 Destain Solution	No specific data.	
Protein 250 Gel Matrix	No specific data.	
Protein 250 Sample Buffer	No specific data.	
Protein 250 Ladder	No specific data.	

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

Short term exposure

Section 11. Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 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. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 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. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 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. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Reproductive toxicity	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 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. 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

Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Protein 250 DMSO Dimethyl sulfoxide	14500	40000	N/A	N/A	N/A
Protein 250 Destain Solution Protein 250 Destain Solution Sodium dodecyl sulphate	128800.1 1288	110000.1 1100	N/A N/A	N/A N/A	N/A N/A
Protein 250 Gel Matrix Protein 250 Gel Matrix Sodium dodecyl sulphate	128805.2 1288	110004.4 1100	N/A N/A	N/A N/A	N/A N/A
Protein 250 Ladder Glycerol	12600	N/A	N/A	N/A	N/A

Other information	: High Sensitivity Protein 250 Labeling Dye Protein 250 DMSO 10 x Protein 250 Labeling Buffer Protein 250 Ethanolamine Protein 250 Destain Solution Protein 250 Gel Matrix Protein 250 Sample Buffer Protein 250 Ladder	Not available. Not available. Not available. Not available. Not available. Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking. Not available. Not available.
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Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Protein 250 DMSO Dimethyl sulfoxide	Acute LC50 25000 ppm Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 34000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 100 µl/L Marine water	Algae - Ulva lactuca	72 hours
	Chronic NOEC 100 µl/L Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	21 days
Protein 250 Destain Solution Sodium dodecyl sulphate	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	Algae - Ulva fasciata - Zoea	96 hours
	Chronic NOEC 1 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	21 days
	Chronic NOEC 3.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Protein 250 Gel Matrix	Chronic NOEC >1357 µg/l Fresh water	Fish - Pimephales promelas	42 days

Section 12. Ecological information

Sodium dodecyl sulphate	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	Algae - Ulva fasciata - Zoea	96 hours
	Chronic NOEC 1 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	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 250 Ladder Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Protein 250 DMSO Dimethyl sulfoxide	OECD 301D Ready Biodegradability - Closed Bottle Test	31 % - Not readily - 28 days	-	-
Protein 250 Destain Solution Sodium dodecyl sulphate	OECD 301B Ready Biodegradability - CO2 Evolution Test	95 % - Readily - 28 days	20 mg/l	Activated sludge
Protein 250 Gel Matrix Sodium dodecyl sulphate	OECD 301B Ready Biodegradability - CO2 Evolution Test	95 % - Readily - 28 days	20 mg/l	Activated sludge
Protein 250 Ladder Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Protein 250 DMSO Dimethyl sulfoxide	-	-	Not readily
Protein 250 Destain Solution Sodium dodecyl sulphate	-	-	Readily
Protein 250 Gel Matrix Sodium dodecyl sulphate	-	-	Readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Protein 250 DMSO Protein 250 DMSO Dimethyl sulfoxide	-1.35 -1.35	- 3.16	low low
Protein 250 Destain Solution Sodium dodecyl sulphate	-2.03	-	low
Protein 250 Gel Matrix Sodium dodecyl sulphate	-2.03	-	low
Protein 250 Ladder Glycerol	-1.76	-	low

Mobility in soil

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

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

Section 13. Disposal considerations

Disposal methods : 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. 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code .

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 IMO instruments : Not available.

Section 15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

6

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Section 15. Regulatory information

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.
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.

Section 16. Any other relevant information

[History](#)

Date of issue/Date of revision : 28/11/2022

Date of previous issue : 04/08/2020

Version : 9

[Key to abbreviations](#)

: ADG = Australian Dangerous Goods
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 SUSMP = Standard Uniform Schedule of Medicine and Poisons
 UN = United Nations

[Procedure used to derive the classification](#)

Section 16. Any other relevant information

Classification	Justification
High Sensitivity Protein 250 Labeling Dye SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	Expert judgment
Protein 250 DMSO FLAMMABLE LIQUIDS - Category 4 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B	On basis of test data Calculation method
Protein 250 Destain Solution SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A	Calculation method
Protein 250 Gel Matrix SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A	Calculation method
Protein 250 Ladder SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B	Calculation method

✔ Indicates information that has changed from previously issued version.

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