



## Section 2. Hazards identification

10X Core PCR Buffer	other users of this product. 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.
50 mM Magnesium Chloride	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.

### Classification of the substance or mixture

#### PCR Enzyme Blend

H320	EYE IRRITATION - Category 2B	
<b>Ingredients of unknown toxicity</b>	<ul style="list-style-type: none"> <li>: Reference Dye</li> <li>20X EvaGreen</li> <li>PCR Enzyme Blend</li> <li>20 mM dNTP Mix (5 mM each dNTP)</li> <li>10X Core PCR Buffer</li> <li>50 mM Magnesium Chloride</li> </ul>	<ul style="list-style-type: none"> <li>Percentage of the mixture consisting of ingredient (s) of unknown toxicity: 2.4%</li> <li>Not applicable.</li> <li>Not applicable.</li> <li>Not applicable.</li> <li>Percentage of the mixture consisting of ingredient (s) of unknown toxicity: 2.4%</li> <li>Not applicable.</li> </ul>

### 2.2 GHS label elements

<b>Signal word</b>	<ul style="list-style-type: none"> <li>: Reference Dye</li> <li>20X EvaGreen</li> <li>PCR Enzyme Blend</li> <li>20 mM dNTP Mix</li> <li>10X Core PCR Buffer</li> <li>50 mM Magnesium Chloride</li> </ul>	<ul style="list-style-type: none"> <li>No signal word.</li> <li>No signal word.</li> <li>Warning</li> <li>No signal word.</li> <li>No signal word.</li> <li>No signal word.</li> </ul>
<b>Hazard statements</b>	<ul style="list-style-type: none"> <li>: Reference Dye</li> <li>20X EvaGreen</li> <li>PCR Enzyme Blend</li> <li>20 mM dNTP Mix</li> <li>10X Core PCR Buffer</li> <li>50 mM Magnesium Chloride</li> </ul>	<ul style="list-style-type: none"> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> <li>H320 - Causes eye irritation.</li> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> <li>No known significant effects or critical hazards.</li> </ul>
<b>Precautionary statements</b>		
<b>Prevention</b>	<ul style="list-style-type: none"> <li>: Reference Dye</li> <li>20X EvaGreen</li> <li>PCR Enzyme Blend</li> <li>20 mM dNTP Mix</li> <li>10X Core PCR Buffer</li> <li>50 mM Magnesium Chloride</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> <li>Not applicable.</li> <li>P264 - Wash hands thoroughly after handling.</li> <li>Not applicable.</li> <li>Not applicable.</li> <li>Not applicable.</li> </ul>
<b>Response</b>	<ul style="list-style-type: none"> <li>: Reference Dye</li> <li>20X EvaGreen</li> <li>PCR Enzyme Blend</li> <li>20 mM dNTP Mix</li> <li>10X Core PCR Buffer</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> <li>Not applicable.</li> <li>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P337 + P313 - If eye irritation persists: Get medical attention.</li> <li>Not applicable.</li> <li>Not applicable.</li> </ul>

## Section 2. Hazards identification

<b>Storage</b>	50 mM Magnesium Chloride	Not applicable.
	: Reference Dye	Not applicable.
	20X EvaGreen	Not applicable.
	PCR Enzyme Blend	Not applicable.
	20 mM dNTP Mix	Not applicable.
	10X Core PCR Buffer	Not applicable.
<b>Disposal</b>	50 mM Magnesium Chloride	Not applicable.
	: Reference Dye	Not applicable.
	20X EvaGreen	Not applicable.
	PCR Enzyme Blend	Not applicable.
	20 mM dNTP Mix	Not applicable.
	10X Core PCR Buffer	Not applicable.
<b>Supplemental label elements</b>	50 mM Magnesium Chloride	Not applicable.
	: Reference Dye	None known.
	20X EvaGreen	None known.
	PCR Enzyme Blend	None known.
	20 mM dNTP Mix	None known.
	10X Core PCR Buffer	None known.
<b>2.3 Other hazards</b>	50 mM Magnesium Chloride	None known.
	<b>Hazards not otherwise classified</b>	
	: Reference Dye	None known.
	20X EvaGreen	None known.
	PCR Enzyme Blend	None known.
	20 mM dNTP Mix (5 mM each dNTP)	None known.
10X Core PCR Buffer	None known.	
50 mM Magnesium Chloride	None known.	

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Reference Dye	Mixture
	20X EvaGreen	Mixture
	PCR Enzyme Blend	Mixture
	20 mM dNTP Mix	Mixture
	10X Core PCR Buffer	Mixture
	50 mM Magnesium Chloride	Mixture

Ingredient name	%	CAS number
<b>Reference Dye</b>		
Potassium chloride	≤5	7447-40-7
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≤3	1185-53-1
<b>PCR Enzyme Blend</b>		
Glycerol	≥50 - ≤75	56-81-5
<b>10X Core PCR Buffer</b>		
Potassium chloride	≤5	7447-40-7
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≤3	1185-53-1

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

: Reference Dye

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.

20X EvaGreen

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.

PCR Enzyme Blend

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.

20 mM dNTP Mix

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.

10X Core PCR 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.

50 mM Magnesium Chloride

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.

#### Inhalation

: Reference Dye

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.

20X EvaGreen

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

PCR Enzyme Blend

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.

20 mM dNTP Mix

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

10X Core PCR 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.

## Section 4. First aid measures

	50 mM Magnesium Chloride	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	: Reference Dye	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	20X EvaGreen	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	PCR Enzyme Blend	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.
	20 mM dNTP Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	10X Core PCR Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	50 mM Magnesium Chloride	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: Reference Dye	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.
	20X EvaGreen	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.
	PCR Enzyme Blend	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.
	20 mM dNTP Mix	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

## Section 4. First aid measures

10X Core PCR Buffer

unless directed to do so by medical personnel. Get medical attention if symptoms occur.

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.

50 mM Magnesium Chloride

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.

### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

##### Eye contact

: Reference Dye  
20X EvaGreen  
PCR Enzyme Blend  
20 mM dNTP Mix  
10X Core PCR Buffer  
50 mM Magnesium Chloride

No known significant effects or critical hazards.  
No known significant effects or critical hazards.  
Causes eye irritation.

No known significant effects or critical hazards.  
No known significant effects or critical hazards.  
No known significant effects or critical hazards.

##### Inhalation

: Reference Dye  
20X EvaGreen  
PCR Enzyme Blend  
20 mM dNTP Mix  
10X Core PCR Buffer  
50 mM Magnesium Chloride

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

: Reference Dye  
20X EvaGreen  
PCR Enzyme Blend  
20 mM dNTP Mix  
10X Core PCR Buffer  
50 mM Magnesium Chloride

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

: Reference Dye  
20X EvaGreen  
PCR Enzyme Blend  
20 mM dNTP Mix  
10X Core PCR Buffer  
50 mM Magnesium Chloride

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.

#### Over-exposure signs/symptoms

##### Eye contact

: Reference Dye  
20X EvaGreen  
PCR Enzyme Blend  
  
20 mM dNTP Mix  
10X Core PCR Buffer  
50 mM Magnesium Chloride

No specific data.  
No specific data.  
Adverse symptoms may include the following:  
irritation  
watering  
redness  
No specific data.  
No specific data.  
No specific data.

## Section 4. First aid measures

<b>Inhalation</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Skin contact</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Ingestion</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

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

<b>Notes to physician</b>	: Reference Dye  20X EvaGreen  PCR Enzyme Blend  20 mM dNTP Mix  10X Core PCR Buffer  50 mM Magnesium Chloride	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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: Reference Dye  20X EvaGreen  PCR Enzyme Blend  20 mM dNTP Mix  10X Core PCR Buffer	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. 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. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk

## Section 4. First aid measures

50 mM Magnesium Chloride

or without suitable training.  
No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

: Reference Dye

20X EvaGreen

PCR Enzyme Blend

20 mM dNTP Mix

10X Core PCR Buffer

50 mM Magnesium Chloride

Use an extinguishing agent suitable for the surrounding fire.

Use an extinguishing agent suitable for the surrounding fire.

Use an extinguishing agent suitable for the surrounding fire.

Use an extinguishing agent suitable for the surrounding fire.

Use an extinguishing agent suitable for the surrounding fire.

Use an extinguishing agent suitable for the surrounding fire.

#### Unsuitable extinguishing media

: Reference Dye

20X EvaGreen

PCR Enzyme Blend

20 mM dNTP Mix

10X Core PCR Buffer

50 mM Magnesium Chloride

None known.

None known.

None known.

None known.

None known.

None known.

### 5.2 Special hazards arising from the substance or mixture

#### Specific hazards arising from the chemical

: Reference Dye

20X EvaGreen

PCR Enzyme Blend

20 mM dNTP Mix

10X Core PCR Buffer

50 mM Magnesium Chloride

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.

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In a fire or if heated, a pressure increase will occur and the container may burst.

#### Hazardous thermal decomposition products

: Reference Dye

20X EvaGreen

PCR Enzyme Blend

20 mM dNTP Mix

10X Core PCR Buffer

Decomposition products may include the following materials:

carbon dioxide

carbon monoxide

nitrogen oxides

halogenated compounds

metal oxide/oxides

No specific data.

Decomposition products may include the following materials:

carbon dioxide

carbon monoxide

No specific data.

Decomposition products may include the following materials:

carbon dioxide



## Section 5. Fire-fighting measures

50 mM Magnesium Chloride	carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
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### 5.3 Advice for firefighters

#### Special protective actions for fire-fighters

Reference 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.
20X EvaGreen	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.
PCR Enzyme Blend	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.
20 mM dNTP Mix	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.
10X Core PCR 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.
50 mM Magnesium Chloride	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

Reference Dye	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
20X EvaGreen	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
PCR Enzyme Blend	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
20 mM dNTP Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
10X Core PCR Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
50 mM Magnesium Chloride	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

: Reference 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 spilled material. Put on appropriate personal protective equipment.

20X EvaGreen

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.

PCR Enzyme Blend

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.

20 mM dNTP Mix

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.

10X Core PCR 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.

50 mM Magnesium Chloride

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.

#### For emergency responders

: Reference Dye

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".

20X EvaGreen

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".

PCR Enzyme Blend

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".

20 mM dNTP Mix

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".

10X Core PCR Buffer

If specialized clothing is required to deal with the spillage, take note of any information in Section 8

## Section 6. Accidental release measures

50 mM Magnesium Chloride

on suitable and unsuitable materials. See also the information in "For non-emergency personnel". 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

: Reference Dye

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).

20X EvaGreen

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).

PCR Enzyme Blend

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).

20 mM dNTP Mix

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).

10X Core PCR 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).

50 mM Magnesium Chloride

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** : Reference Dye

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.

20X EvaGreen

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.

PCR Enzyme Blend

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 6. Accidental release measures

20 mM dNTP Mix	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.
10X Core PCR 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.
50 mM Magnesium Chloride	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

<b>Protective measures</b>	: Reference Dye	Put on appropriate personal protective equipment (see Section 8).
	20X EvaGreen	Put on appropriate personal protective equipment (see Section 8).
	PCR Enzyme Blend	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.
	20 mM dNTP Mix	Put on appropriate personal protective equipment (see Section 8).
	10X Core PCR Buffer	Put on appropriate personal protective equipment (see Section 8).
	50 mM Magnesium Chloride	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: Reference 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.
	20X EvaGreen	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.
	PCR Enzyme Blend	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

## Section 7. Handling and storage

20 mM dNTP Mix (5 mM each dNTP)

before entering eating areas. See also Section 8 for additional information on hygiene measures. 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. 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. 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.

10X Core PCR 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. 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.

50 mM Magnesium Chloride

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

### 7.2 Conditions for safe storage, including any incompatibilities

:  Reference Dye

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.

20X EvaGreen

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.

PCR Enzyme Blend

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.

20 mM dNTP Mix

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

## Section 7. Handling and storage

10X Core PCR Buffer

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.

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.

50 mM Magnesium Chloride

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.

### 7.3 Specific end use(s)

#### Recommendations

: Reference Dye  
20X EvaGreen  
PCR Enzyme Blend  
20 mM dNTP Mix  
10X Core PCR Buffer  
50 mM Magnesium Chloride

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

#### Industrial sector specific solutions

: Reference Dye  
20X EvaGreen  
PCR Enzyme Blend  
20 mM dNTP Mix  
10X Core PCR Buffer  
50 mM Magnesium Chloride

Not applicable.  
Not applicable.  
Not applicable.  
Not applicable.  
Not applicable.  
Not applicable.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<b>Reference Dye</b> Potassium chloride 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	None. None.
<b>PCR Enzyme Blend</b> Glycerol	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction

## Section 8. Exposure controls/personal protection

TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust

### 10X Core PCR Buffer

Potassium chloride

2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride

None.

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: safety glasses with side-shields.

### Skin protection

#### Hand protection

:  Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Respiratory protection

:  Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

#### Physical state

: <input checked="" type="checkbox"/> Reference Dye	Liquid.
20X EvaGreen	Liquid.
PCR Enzyme Blend	Liquid.
20 mM dNTP Mix (5 mM each dNTP)	Liquid.
10X Core PCR Buffer	Liquid.
50 mM Magnesium Chloride	Liquid.

## Section 9. Physical and chemical properties

<b>Color</b>	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
<b>Odor</b>	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
<b>Odor threshold</b>	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
<b>pH</b>	: Reference Dye	8
	20X EvaGreen	Not available.
	PCR Enzyme Blend	8
	20 mM dNTP Mix (5 mM each dNTP)	7.5
	10X Core PCR Buffer	8
<b>Melting point</b>	: Reference Dye	0°C (32°F)
	20X EvaGreen	0°C (32°F)
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	0°C (32°F)
	10X Core PCR Buffer	Not available.
<b>Boiling point</b>	: Reference Dye	100°C (212°F)
	20X EvaGreen	100°C (212°F)
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix (5 mM each dNTP)	100°C (212°F)
	10X Core PCR Buffer	Not available.
<b>Flash point</b>	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix (5 mM each dNTP)	Not available.
	10X Core PCR Buffer	Not available.
<b>Evaporation rate</b>	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
	50 mM Magnesium Chloride	Not available.



## Section 9. Physical and chemical properties

<b>Flammability (solid, gas)</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Lower and upper explosive (flammable) limits</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix (5 mM each dNTP) 10X Core PCR Buffer 50 mM Magnesium Chloride	Not available. Not available. Not available. Not available. Not available. Not available.
<b>Vapor pressure</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix (5 mM each dNTP) 10X Core PCR Buffer 50 mM Magnesium Chloride	Not available. Not available. Not available. Not available. Not available. Not available.
<b>Vapor density</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Not available. Not available. Not available. Not available. Not available. Not available.
<b>Relative density</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Not available. 1 Not available. 1 Not available. Not available.
<b>Solubility</b>	: Reference Dye  20X EvaGreen  PCR Enzyme Blend  20 mM dNTP Mix 10X Core PCR Buffer  50 mM Magnesium Chloride	Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water. Not available. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Not available. Not available. Not available. Not available. Not available. Not available.
<b>Auto-ignition temperature</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Not available. Not available. Not available. Not available. Not available. Not available.

## Section 9. Physical and chemical properties

<b>Decomposition temperature</b>	<b>:</b> Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
	50 mM Magnesium Chloride	Not available.
<b>Viscosity</b>	<b>:</b> Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix (5 mM each dNTP)	Not available.
	10X Core PCR Buffer	Not available.
	50 mM Magnesium Chloride	Not available.

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	<b>:</b> Reference Dye	No specific test data related to reactivity available for this product or its ingredients.
	20X EvaGreen	No specific test data related to reactivity available for this product or its ingredients.
	PCR Enzyme Blend	No specific test data related to reactivity available for this product or its ingredients.
	20 mM dNTP Mix	No specific test data related to reactivity available for this product or its ingredients.
	10X Core PCR Buffer	No specific test data related to reactivity available for this product or its ingredients.
	50 mM Magnesium Chloride	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	<b>:</b> Reference Dye	The product is stable.
	20X EvaGreen	The product is stable.
	PCR Enzyme Blend	The product is stable.
	20 mM dNTP Mix	The product is stable.
	10X Core PCR Buffer	The product is stable.
	50 mM Magnesium Chloride	The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	<b>:</b> Reference Dye	Under normal conditions of storage and use, hazardous reactions will not occur.
	20X EvaGreen	Under normal conditions of storage and use, hazardous reactions will not occur.
	PCR Enzyme Blend	Under normal conditions of storage and use, hazardous reactions will not occur.
	20 mM dNTP Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
	10X Core PCR Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	50 mM Magnesium Chloride	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	<b>:</b> Reference Dye	No specific data.
	20X EvaGreen	No specific data.
	PCR Enzyme Blend	No specific data.
	20 mM dNTP Mix	No specific data.
	10X Core PCR Buffer	No specific data.
	50 mM Magnesium Chloride	No specific data.

## Section 10. Stability and reactivity

<b>10.5 Incompatible materials</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
<b>10.6 Hazardous decomposition products</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>Reference Dye</b> Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
<b>PCR Enzyme Blend</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>10X Core PCR Buffer</b> Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>Reference Dye</b> Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>PCR Enzyme Blend</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

## Section 11. Toxicological information

<b>10X Core PCR Buffer</b> Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
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### 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
<b>Reference Dye</b> 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation
<b>10X Core PCR Buffer</b> 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

: Reference Dye

20X EvaGreen  
PCR Enzyme Blend

20 mM dNTP Mix (5 mM each  
dNTP)  
10X Core PCR Buffer

50 mM Magnesium Chloride

Routes of entry anticipated: Oral, Dermal, Inhalation.

Not available.

Routes of entry anticipated: Oral, Dermal, Inhalation.

Not available.

Routes of entry anticipated: Oral, Dermal, Inhalation.

Not available.

### Potential acute health effects

#### Eye contact

: Reference Dye

20X EvaGreen  
PCR Enzyme Blend

20 mM dNTP Mix  
10X Core PCR Buffer

50 mM Magnesium Chloride

No known significant effects or critical hazards.  
No known significant effects or critical hazards.  
Causes eye irritation.

No known significant effects or critical hazards.  
No known significant effects or critical hazards.  
No known significant effects or critical hazards.

## Section 11. Toxicological information

<b>Inhalation</b>	: <input checked="" type="checkbox"/> Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Reference Dye 20X EvaGreen PCR Enzyme Blend  20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. Adverse symptoms may include the following: irritation watering redness  No specific data. No specific data. No specific data.
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. 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.

**Potential delayed effects** : Not available.

#### Long term exposure

## Section 11. Toxicological information

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

<b>General</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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.
<b>Carcinogenicity</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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.
<b>Mutagenicity</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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.
<b>Teratogenicity</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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.
<b>Developmental effects</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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.
<b>Fertility effects</b>	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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

Route	ATE value
Reference Dye Oral	70270.3 mg/kg
10X Core PCR Buffer Oral	70270.3 mg/kg

## Section 12. Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>Reference Dye</b> Potassium chloride	Acute EC50 1337000 µg/l Fresh water Acute EC50 9.24 g/L Fresh water	Algae - Navicula seminulum Algae - Desmodesmus subspicatus	96 hours 72 hours
	Acute EC50 141460 µg/l Fresh water Acute LC50 880000 µg/l Fresh water	Daphnia - Daphnia magna Fish - Pimephales promelas	48 hours 96 hours
<b>PCR Enzyme Blend</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
<b>10X Core PCR Buffer</b> Potassium chloride	Acute EC50 1337000 µg/l Fresh water Acute EC50 9.24 g/L Fresh water	Algae - Navicula seminulum Algae - Desmodesmus subspicatus	96 hours 72 hours
	Acute EC50 141460 µg/l Fresh water Acute LC50 880000 µg/l Fresh water	Daphnia - Daphnia magna Fish - Pimephales promelas	48 hours 96 hours

### 12.2 Persistence and degradability

Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>Reference Dye</b> Potassium chloride	-0.46	-	low
<b>PCR Enzyme Blend</b> Glycerol	-1.76	-	low
<b>10X Core PCR Buffer</b> Potassium chloride	-0.46	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 13. Disposal considerations

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

### Regulatory information

DOT / IMDG / IATA : Not regulated.

## Section 15. Regulatory information

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

**U.S. Federal regulations** : **United States inventory (TSCA 8b)**: At least one component is not listed.  
**Clean Water Act (CWA) 311**: Edetic acid

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**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

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** :  Not applicable.

#### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
<input checked="" type="checkbox"/> <b>Reference Dye</b> Potassium chloride	≤5	No.	No.	No.	Yes.	No.
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≤3	No.	No.	No.	Yes.	No.
<b>PCR Enzyme Blend</b> Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.



## Section 15. Regulatory information

<b>10X Core PCR Buffer</b>						
Potassium chloride	≤5	No.	No.	No.	Yes.	No.
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≤3	No.	No.	No.	Yes.	No.

### 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
- Pennsylvania** : The following components are listed: 1,2,3-PROPANETRIOL
- California Prop. 65**  
No products were found.
- Canada inventory** : Not determined.

### International regulations

- International lists** :
- Australia inventory (AICS)**: Not determined.
  - China inventory (IECSC)**: Not determined.
  - Japan inventory (ENCS)**: Not determined.
  - Japan inventory (ISHL)**: Not determined.
  - Korea inventory**: Not determined.
  - Malaysia Inventory (EHS Register)**: Not determined.
  - New Zealand Inventory of Chemicals (NZIoC)**: Not determined.
  - Philippines inventory (PICCS)**: Not determined.
  - Taiwan Chemical Substances Inventory (TCSI)**: Not determined.
  - Turkey inventory**: Not determined.
- Chemical Weapons Convention List Schedule I Chemicals** : Not listed
- Chemical Weapons Convention List Schedule II Chemicals** : Not listed
- Chemical Weapons Convention List Schedule III Chemicals** : Not listed

## Section 16. Other information

### History

- Date of issue** : 03/30/2016
- Date of previous issue** : 06/25/2014.
- Version** : 3

Indicates information that has changed from previously issued version.

### Notice to reader

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