

SAFETY DATA SHEET



MBS Mammalian Transfection Kit, Part Number 200388

Section 1. Identification

Product identifier : MBS Mammalian Transfection Kit, Part Number 200388
Part No. (Chemical Kit) : 200388
Part No. : MBS Transfection Kit Solution 1 200388-51
 MBS Transfection Kit Solution 2 200388-52
 MBS Transfection Kit Soltuion 3 200388-53
 pCMV β-Gal Control Plasmid 200388-54

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

Analytical reagent.

MBS Transfection Kit Solution 1	10 mL	
MBS Transfection Kit Solution 2	50 mL	
MBS Transfection Kit Soltuion 3	80 mL	
pCMV β-Gal Control Plasmid	0.04 mL (40 µg	1 µg/µl)

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

MBS Transfection Kit
 Solution 1
 H319

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

MBS Transfection Kit Solution 1	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 37%
MBS Transfection Kit Solution 2	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 1.1%
MBS Transfection Kit Soltuion 3	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 98.8%
MBS Transfection Kit Solution 2	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.1%
MBS Transfection Kit Soltuion 3	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 98.8%

GHS label elements

Hazard pictograms



Section 2. Hazard(s) identification

Signal word	: MBS Transfection Kit Solution 1	WARNING
	MBS Transfection Kit Solution 2	No signal word.
	MBS Transfection Kit Solution 3	No signal word.
	pCMV β -Gal Control Plasmid	No signal word.
Hazard statements	: MBS Transfection Kit Solution 1	H319 - Causes serious eye irritation.
	MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
	MBS Transfection Kit Solution 3	No known significant effects or critical hazards.
	pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.
<u>Precautionary statements</u>		
Prevention	: MBS Transfection Kit Solution 1	P280 - Wear eye or face protection.
	MBS Transfection Kit Solution 2	P264 - Wash hands thoroughly after handling. Not applicable.
	MBS Transfection Kit Solution 3	Not applicable.
	pCMV β -Gal Control Plasmid	Not applicable.
Response	: MBS Transfection Kit Solution 1	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	MBS Transfection Kit Solution 2	Not applicable.
	MBS Transfection Kit Solution 3	Not applicable.
	pCMV β -Gal Control Plasmid	Not applicable.
Storage	: MBS Transfection Kit Solution 1	Not applicable.
	MBS Transfection Kit Solution 2	Not applicable.
	MBS Transfection Kit Solution 3	Not applicable.
	pCMV β -Gal Control Plasmid	Not applicable.
Disposal	: MBS Transfection Kit Solution 1	Not applicable.
	MBS Transfection Kit Solution 2	Not applicable.
	MBS Transfection Kit Solution 3	Not applicable.
	pCMV β -Gal Control Plasmid	Not applicable.
Supplemental label elements	: MBS Transfection Kit Solution 1	Not applicable.
	MBS Transfection Kit Solution 2	Not applicable.
	MBS Transfection Kit Solution 3	Not applicable.
	pCMV β -Gal Control Plasmid	Not applicable.

Section 2. Hazard(s) identification

Other hazards which do not result in classification	<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1	None known.
	MBS Transfection Kit Solution 2	None known.
	MBS Transfection Kit Soltuion 3	None known.
	pCMV β -Gal Control Plasmid	None known.

Section 3. Composition and ingredient information

Substance/mixture	<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1	Mixture
	MBS Transfection Kit Solution 2	Mixture
	MBS Transfection Kit Soltuion 3	Mixture
	pCMV β -Gal Control Plasmid	Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1 Calcium chloride (CaCl ₂), dihydrate	$\geq 30 - \leq 60$	10035-04-8
<input checked="" type="checkbox"/> MBS Transfection Kit Soltuion 3 Ethanol	≤ 3	64-17-5

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

Description of necessary first aid measures

Eye contact	<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1	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.
	MBS Transfection Kit Solution 2	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.
	MBS Transfection Kit Soltuion 3	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.
	pCMV β -Gal Control Plasmid	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	<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1	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

	MBS Transfection Kit Solution 2	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.
	MBS Transfection Kit Soltuion 3	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pCMV β -Gal Control Plasmid	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:  MBS Transfection Kit Solution 1	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.
	MBS Transfection Kit Solution 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	MBS Transfection Kit Soltuion 3	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pCMV β -Gal Control Plasmid	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:  MBS Transfection Kit Solution 1	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.
	MBS Transfection Kit Solution 2	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.
	MBS Transfection Kit Soltuion 3	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.
	pCMV β -Gal Control Plasmid	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	MBS Transfection Kit Solution 1	Causes serious eye irritation.
		MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
		MBS Transfection Kit Solution 3	No known significant effects or critical hazards.
		pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.
Inhalation	:	MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
		MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
		MBS Transfection Kit Solution 3	No known significant effects or critical hazards.
		pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.
Skin contact	:	MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
		MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
		MBS Transfection Kit Solution 3	No known significant effects or critical hazards.
		pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.
Ingestion	:	MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
		MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
		MBS Transfection Kit Solution 3	No known significant effects or critical hazards.
		pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	MBS Transfection Kit Solution 1	Adverse symptoms may include the following: pain or irritation watering redness
		MBS Transfection Kit Solution 2	No specific data.
		MBS Transfection Kit Solution 3	No specific data.
		pCMV β -Gal Control Plasmid	No specific data.
Inhalation	:	MBS Transfection Kit Solution 1	No specific data.
		MBS Transfection Kit Solution 2	No specific data.
		MBS Transfection Kit Solution 3	No specific data.
		pCMV β -Gal Control Plasmid	No specific data.
Skin contact	:	MBS Transfection Kit Solution 1	No specific data.
		MBS Transfection Kit Solution 2	No specific data.
		MBS Transfection Kit Solution 3	No specific data.
		pCMV β -Gal Control Plasmid	No specific data.

Section 4. First aid measures

Ingestion	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Soltuion 3 pCMV β -Gal Control Plasmid	No specific data. No specific data. No specific data. No specific data.
<u>Indication of immediate medical attention and special treatment needed, if necessary</u>		
Notes to physician	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Soltuion 3 pCMV β -Gal Control Plasmid	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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Soltuion 3 pCMV β -Gal Control Plasmid	No specific treatment. No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Soltuion 3 pCMV β -Gal Control Plasmid	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 or without suitable training. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Soltuion 3 pCMV β -Gal Control Plasmid	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	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Soltuion 3 pCMV β -Gal Control Plasmid	None known. None known. None known. None known.


Section 5. Firefighting measures

Specific hazards arising from the chemical	: MBS Transfection Kit Solution 1	In a fire or if heated, a pressure increase will occur and the container may burst.
	MBS Transfection Kit Solution 2	In a fire or if heated, a pressure increase will occur and the container may burst.
	MBS Transfection Kit Soltuion 3	In a fire or if heated, a pressure increase will occur and the container may burst.
	pCMV β -Gal Control Plasmid	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: MBS Transfection Kit Solution 1	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
	MBS Transfection Kit Solution 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides
	MBS Transfection Kit Soltuion 3	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	pCMV β -Gal Control Plasmid	No specific data.
Special protective actions for fire-fighters	: MBS Transfection Kit Solution 1	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.
	MBS Transfection Kit Solution 2	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.
	MBS Transfection Kit Soltuion 3	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.
	pCMV β -Gal Control Plasmid	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	: MBS Transfection Kit Solution 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	MBS Transfection Kit Solution 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	MBS Transfection Kit Soltuion 3	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	pCMV β -Gal Control Plasmid	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

:  MBS Transfection Kit Solution 1	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.
MBS Transfection Kit Solution 2	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.
MBS Transfection Kit Soltuion 3	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.
pCMV β -Gal Control Plasmid	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

For emergency responders

:  MBS Transfection Kit Solution 1	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".
MBS Transfection Kit Solution 2	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".
MBS Transfection Kit Soltuion 3	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".
pCMV β -Gal Control Plasmid	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

:  MBS Transfection Kit Solution 1	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).
MBS Transfection Kit Solution 2	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).
MBS Transfection Kit Soltuion 3	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).
pCMV β -Gal Control Plasmid	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has

Section 6. Accidental release measures



caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Methods for cleaning up	:  MBS Transfection Kit Solution 1	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.
	MBS Transfection Kit Solution 2	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.
	MBS Transfection Kit Soltuion 3	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.
	pCMV β -Gal Control Plasmid	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	:  MBS Transfection Kit Solution 1	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.
	MBS Transfection Kit Solution 2	Put on appropriate personal protective equipment (see Section 8).
	MBS Transfection Kit Soltuion 3	Put on appropriate personal protective equipment (see Section 8).
	pCMV β -Gal Control Plasmid	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:  MBS Transfection Kit Solution 1	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.
	MBS Transfection Kit Solution 2	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.
	MBS Transfection Kit Soltuion 3	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and

Section 7. Handling and storage

		<p>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.</p>
<p>Conditions for safe storage, including any incompatibilities</p>	<p>pCMV β-Gal Control Plasmid</p>	<p>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.</p>
	<p>MBS Transfection Kit Solution 1</p>	<p>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.</p>
	<p>MBS Transfection Kit Solution 2</p>	<p>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.</p>
	<p>MBS Transfection Kit Solution 3</p>	<p>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.</p>
	<p>pCMV β-Gal Control Plasmid</p>	<p>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.</p>

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Section 8. Exposure controls and personal protection

Ingredient name	Exposure limits
MBS Transfection Kit Soltuion 3 Ethanol	Safe Work Australia (Australia, 1/2014). TWA: 1880 mg/m ³ 8 hours. TWA: 1000 ppm 8 hours.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- 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

Appearance

- Physical state** :
- | | |
|---------------------------------|---------|
| MBS Transfection Kit Solution 1 | Liquid. |
| MBS Transfection Kit Solution 2 | Liquid. |
| MBS Transfection Kit Soltuion 3 | Liquid. |
| pCMV β-Gal Control Plasmid | Liquid. |

Section 9. Physical and chemical properties

Colour	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.
Odour	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.
Odour threshold	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.
pH	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	6.95
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.
Melting point	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	0°C (32°F)
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	0°C (32°F)
Boiling point	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	100°C (212°F)
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	100°C (212°F)
Flash point	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.
Evaporation rate	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.

Section 9. Physical and chemical properties

Flammability (solid, gas)	: MBS Transfection Kit Solution 1	Not applicable.
	MBS Transfection Kit Solution 2	Not applicable.
	MBS Transfection Kit Solution 3	Not applicable.
	pCMV β -Gal Control Plasmid	Not applicable.
Lower and upper explosive (flammable) limits	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.
Vapour pressure	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.
Vapour density	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.
Relative density	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.
Solubility	: MBS Transfection Kit Solution 1	Soluble in the following materials: cold water and hot water.
	MBS Transfection Kit Solution 2	Easily soluble in the following materials: cold water and hot water.
	MBS Transfection Kit Solution 3	Easily soluble in the following materials: cold water and hot water.
	pCMV β -Gal Control Plasmid	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.
Auto-ignition temperature	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Solution 3	Not available.
	pCMV β -Gal Control Plasmid	Not available.

Section 9. Physical and chemical properties

Decomposition temperature	:	<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1	Not available.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 2	Not available.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 3	Not available.
		<input checked="" type="checkbox"/> pCMV β -Gal Control Plasmid	Not available.
Viscosity	:	<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1	Not available.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 2	Not available.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 3	Not available.
		<input checked="" type="checkbox"/> pCMV β -Gal Control Plasmid	Not available.

Section 10. Stability and reactivity

Reactivity	:	<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1	No specific test data related to reactivity available for this product or its ingredients.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 2	No specific test data related to reactivity available for this product or its ingredients.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 3	No specific test data related to reactivity available for this product or its ingredients.
		<input checked="" type="checkbox"/> pCMV β -Gal Control Plasmid	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1	The product is stable.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 2	The product is stable.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 3	The product is stable.
		<input checked="" type="checkbox"/> pCMV β -Gal Control Plasmid	The product is stable.
Possibility of hazardous reactions	:	<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1	Under normal conditions of storage and use, hazardous reactions will not occur.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 2	Under normal conditions of storage and use, hazardous reactions will not occur.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 3	Under normal conditions of storage and use, hazardous reactions will not occur.
		<input checked="" type="checkbox"/> pCMV β -Gal Control Plasmid	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1	No specific data.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 2	No specific data.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 3	No specific data.
		<input checked="" type="checkbox"/> pCMV β -Gal Control Plasmid	No specific data.
Incompatible materials	:	<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1	May react or be incompatible with oxidising materials.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 2	May react or be incompatible with oxidising materials.
		<input checked="" type="checkbox"/> MBS Transfection Kit Solution 3	May react or be incompatible with oxidising materials.
		<input checked="" type="checkbox"/> pCMV β -Gal Control Plasmid	May react or be incompatible with oxidising materials.

Section 10. Stability and reactivity

Hazardous decomposition products	: MBS Transfection Kit Solution 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	MBS Transfection Kit Solution 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	MBS Transfection Kit Solution 3	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	pCMV β -Gal Control Plasmid	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
MBS Transfection Kit Solution 3 Ethanol	LC50 Inhalation Vapour LD50 Oral	Rat Rat	124700 mg/m ³ 7 g/kg	4 hours -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
MBS Transfection Kit Solution 3 Ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Section 11. Toxicological information

Not available.

Information on likely routes of exposure	: MBS Transfection Kit Solution 1	Routes of entry anticipated: Oral, Dermal, Inhalation.
	MBS Transfection Kit Solution 2	Routes of entry anticipated: Oral, Dermal, Inhalation.
	MBS Transfection Kit Soltuion 3	Routes of entry anticipated: Oral, Dermal, Inhalation.
	pCMV β -Gal Control Plasmid	Not available.

Potential acute health effects

Eye contact	: MBS Transfection Kit Solution 1	Causes serious eye irritation.
	MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
	MBS Transfection Kit Soltuion 3	No known significant effects or critical hazards.
	pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.
Inhalation	: MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
	MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
	MBS Transfection Kit Soltuion 3	No known significant effects or critical hazards.
	pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.
Skin contact	: MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
	MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
	MBS Transfection Kit Soltuion 3	No known significant effects or critical hazards.
	pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.
Ingestion	: MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
	MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
	MBS Transfection Kit Soltuion 3	No known significant effects or critical hazards.
	pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: MBS Transfection Kit Solution 1	Adverse symptoms may include the following: pain or irritation watering redness
	MBS Transfection Kit Solution 2	No specific data.
	MBS Transfection Kit Soltuion 3	No specific data.
	pCMV β -Gal Control Plasmid	No specific data.
Inhalation	: MBS Transfection Kit Solution 1	No specific data.
	MBS Transfection Kit Solution 2	No specific data.
	MBS Transfection Kit Soltuion 3	No specific data.
	pCMV β -Gal Control Plasmid	No specific data.

Section 11. Toxicological information

Skin contact	: MBS Transfection Kit Solution 1	No specific data.
	MBS Transfection Kit Solution 2	No specific data.
	MBS Transfection Kit Soltuion 3	No specific data.
	pCMV β -Gal Control Plasmid	No specific data.
Ingestion	: MBS Transfection Kit Solution 1	No specific data.
	MBS Transfection Kit Solution 2	No specific data.
	MBS Transfection Kit Soltuion 3	No specific data.
	pCMV β -Gal Control Plasmid	No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General	: MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
	MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
	MBS Transfection Kit Soltuion 3	No known significant effects or critical hazards.
	pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.
Carcinogenicity	: MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
	MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
	MBS Transfection Kit Soltuion 3	No known significant effects or critical hazards.
	pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.
Mutagenicity	: MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
	MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
	MBS Transfection Kit Soltuion 3	No known significant effects or critical hazards.
	pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.
Teratogenicity	: MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
	MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
	MBS Transfection Kit Soltuion 3	No known significant effects or critical hazards.
	pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.

Section 11. Toxicological information

Developmental effects	: MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
	MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
	MBS Transfection Kit Soltuion 3	No known significant effects or critical hazards.
	pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.
Fertility effects	: MBS Transfection Kit Solution 1	No known significant effects or critical hazards.
	MBS Transfection Kit Solution 2	No known significant effects or critical hazards.
	MBS Transfection Kit Soltuion 3	No known significant effects or critical hazards.
	pCMV β -Gal Control Plasmid	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
MBS Transfection Kit Solution 1 Calcium chloride (CaCl ₂), dihydrate	Acute EC50 2900 mg/l Fresh water	Algae	72 hours
	Acute NOEC 2000 mg/l Fresh water	Daphnia	48 hours
MBS Transfection Kit Soltuion 3 Ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 μ g/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 μ g/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 μ g/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 100 u/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Chronic NOEC 0.375 u/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks	

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
MBS Transfection Kit Soltuion 3 Ethanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
MBS Transfection Kit Soltuion 3 Ethanol	-0.35	0.5	low

Section 12. Ecological information

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

Regulatory 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 Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

Australia inventory (AICS) : Not determined.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

Section 15. Regulatory information

National inventory

Canada	: Not determined.
China	: Not determined.
Europe	: Not determined.
Japan	: <input checked="" type="checkbox"/> Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
Malaysia	: <input checked="" type="checkbox"/> Not determined.
New Zealand	: <input checked="" type="checkbox"/> Not determined.
Philippines	: <input checked="" type="checkbox"/> Not determined.
Republic of Korea	: <input checked="" type="checkbox"/> Not determined.
Taiwan	: <input checked="" type="checkbox"/> Not determined.
Turkey	: <input checked="" type="checkbox"/> Not determined.
United States	: Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision	: 30/09/2016
Date of previous issue	: 10/09/2014.
Version	: 5

Key to abbreviations

: ADG = Australian Dangerous Goods
: 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)
: NOHSC = National Occupational Health and Safety Commission
: SUSMP = Standard Uniform Schedule of Medicine and Poisons
: UN = United Nations

Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> MBS Transfection Kit Solution 1 Eye Irrit. 2A, H319	Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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