

# SAFETY DATA SHEET



MBS Mammalian Transfection Kit, Part Number 200388

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

### 1.1 Product identifier

<b>Product name</b>	: MBS Mammalian Transfection Kit, Part Number 200388		
<b>Part no. (chemical kit)</b>	: 200388		
<b>Part no.</b>	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

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

<b>Identified uses</b>	: 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)
<b>Uses advised against</b>	: None known.		

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH  
 Hewlett-Packard-Str. 8  
 76337 Waldbronn  
 Germany  
 0800 603 1000  
**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

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

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

<b>Product definition</b>	MBS Transfection Kit Solution 1	Mixture
	MBS Transfection Kit Solution 2	Mixture
	MBS Transfection Kit Soltuion 3	Mixture
	pCMV β-Gal Control Plasmid	Mixture

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

##### MBS Transfection Kit

##### Solution 1

H319	SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2
MBS Transfection Kit Solution 1	The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.	
MBS Transfection Kit Solution 2	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.	
MBS Transfection Kit Soltuion 3	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.	
pCMV β-Gal Control Plasmid	The product is not classified as hazardous according to Regulation (EC)	

**SECTION 2: Hazards identification**

1272/2008 as amended.

<b>Ingredients of unknown toxicity</b>	: MBS Transfection Kit Solution 2	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 1 - 10%
	MBS Transfection Kit Soltuion 3	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: > 60% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: > 60% Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: > 60%
<b>Ingredients of unknown ecotoxicity</b>	: MBS Transfection Kit Soltuion 3	Contains 98.8% of components with unknown hazards to the aquatic environment

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

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

**2.2 Label elements**

**Hazard pictograms** : MBS Transfection Kit Solution 1



**Signal word** : MBS Transfection Kit Solution 1 Warning  
MBS Transfection Kit Solution 2 No signal word.  
MBS Transfection Kit Soltuion 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 Soltuion 3 No known significant effects or critical hazards.  
pCMV β-Gal Control Plasmid No known significant effects or critical hazards.

**Precautionary statements**

**Prevention** : MBS Transfection Kit Solution 1 P280 - Wear eye or face protection.  
MBS Transfection Kit Solution 2 Not applicable.  
MBS Transfection Kit Soltuion 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 advice or attention.  
MBS Transfection Kit Solution 2 Not applicable.  
MBS Transfection Kit Soltuion 3 Not applicable.  
pCMV β-Gal Control Plasmid Not applicable.

**SECTION 2: Hazards identification**

<b>Storage</b>	: 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.
<b>Disposal</b>	: 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.
<b>Supplemental label elements</b>	: MBS Transfection Kit Solution 1	Not applicable.
	MBS Transfection Kit Solution 2	Not applicable.
	MBS Transfection Kit Solution 3	Safety data sheet available on request.
	pCMV β-Gal Control Plasmid	Not applicable.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: 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.
<b>Special packaging requirements</b>		
<b>Tactile warning of danger</b>	: 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.
<b>2.3 Other hazards</b>		
<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: MBS Transfection Kit Solution 1	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	MBS Transfection Kit Solution 2	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	MBS Transfection Kit Solution 3	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	pCMV β-Gal Control Plasmid	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
<b>Other hazards which do not result in classification</b>	: MBS Transfection Kit Solution 1	None known.
	MBS Transfection Kit Solution 2	None known.
	MBS Transfection Kit Solution 3	None known.
	pCMV β-Gal Control Plasmid	None known.

**SECTION 3: Composition/information on ingredients**

**3.1 Substances** : MBS Transfection Kit Solution 1 Mixture  
 MBS Transfection Kit Solution 2 Mixture  
 MBS Transfection Kit Soltuion 3 Mixture  
 pCMV β-Gal Control Plasmid Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
<b>MBS Transfection Kit Solution 1</b>  calcium chloride	EC: 233-140-8 CAS: 10035-04-8 Index: 017-013-00-2	≥25 - ≤50	Eye Irrit. 2, H319	-	[1]
<b>MBS Transfection Kit Soltuion 3</b>  ethanol	EC: 200-578-6 CAS: 64-17-5 Index: 603-002-00-5	≤3	Flam. Liq. 2, H225 Eye Irrit. 2, H319  <b>See Section 16 for the full text of the H statements declared above.</b>	Eye Irrit. 2, H319: C ≥ 50%	[1] [2]

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

Type  
 MBS Transfection Kit Solution 1 [1] Substance classified with a health or environmental hazard  
 MBS Transfection Kit Soltuion 3 [1] Substance classified with a health or environmental hazard  
 [2] Substance with a workplace exposure limit

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

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**Eye contact** : 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** : 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.  
 MBS Transfection Kit Solution 2 Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if

**SECTION 4: First aid measures**

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  
Soluition 3

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.

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  
Soluition 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. 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. 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  
Soluition 3

Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

pCMV β-Gal Control  
Plasmid

Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

**Protection of first-aiders**

: MBS Transfection Kit  
Solution 1

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.

MBS Transfection Kit  
Solution 2

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

MBS Transfection Kit  
Soluition 3

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

pCMV β-Gal Control  
Plasmid

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

**SECTION 4: First aid measures**

**4.2 Most important symptoms and effects, both acute and delayed**

Potential acute health effects

<b>Eye contact</b>	: 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.
<b>Inhalation</b>	: 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.
<b>Skin contact</b>	: 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.
<b>Ingestion</b>	: 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.

Over-exposure signs/symptoms

<b>Eye contact</b>	: 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.
<b>Inhalation</b>	: 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.
<b>Skin contact</b>	: 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	No specific data.



## SECTION 4: First aid measures

	Plasmid	
<b>Ingestion</b>	: 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.

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	: MBS Transfection Kit Solution 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	MBS Transfection Kit Solution 2	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	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.
	pCMV β-Gal Control Plasmid	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: MBS Transfection Kit Solution 1	No specific treatment.
	MBS Transfection Kit Solution 2	No specific treatment.
	MBS Transfection Kit Soltuion 3	No specific treatment.
	pCMV β-Gal Control Plasmid	No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: MBS Transfection Kit Solution 1	Use an extinguishing agent suitable for the surrounding fire.
	MBS Transfection Kit Solution 2	Use an extinguishing agent suitable for the surrounding fire.
	MBS Transfection Kit Soltuion 3	Use an extinguishing agent suitable for the surrounding fire.
	pCMV β-Gal Control Plasmid	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: 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.

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

<b>Hazards from the substance or mixture</b>	: 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.

**SECTION 5: Firefighting measures**

<b>Hazardous combustion products</b>	: 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 nitrogen oxides sulfur oxides phosphorus oxides
	pCMV β-Gal Control Plasmid	No specific data.

**5.3 Advice for firefighters**

<b>Special precautions for fire-fighters</b>	: 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.

<b>Special protective equipment for fire-fighters</b>	: 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.



## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	:	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 $\beta$ -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.
<b>For emergency responders</b>	:	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 $\beta$ -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".

### 6.2 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 $\beta$ -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 caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

## SECTION 6: Accidental release measures

<b>Methods for cleaning up</b>	: 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 $\beta$ -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.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
 See Section 8 for information on appropriate personal protective equipment.  
 See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	: 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 $\beta$ -Gal Control Plasmid	Put on appropriate personal protective equipment (see Section 8).
<b>Advice on general occupational hygiene</b>	: 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 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.
	pCMV $\beta$ -Gal Control Plasmid	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

## SECTION 7: Handling and storage

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

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

#### Storage

: MBS Transfection Kit Solution 1	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
MBS Transfection Kit Solution 2	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
MBS Transfection Kit Soltuion 3	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
pCMV $\beta$ -Gal Control Plasmid	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

#### Recommendations

: MBS Transfection Kit Solution 1	Industrial applications, Professional applications.
MBS Transfection Kit Solution 2	Industrial applications, Professional applications.
MBS Transfection Kit Soltuion 3	Industrial applications, Professional applications.
pCMV $\beta$ -Gal Control Plasmid	Industrial applications, Professional applications.

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**SECTION 7: Handling and storage**

<b>Industrial sector specific solutions</b>	<b>:</b> 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 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational exposure limits**

Product/ingredient name	Exposure limit values
MBS Transfection Kit Soltuion 3 ethanol	NAOSH (Ireland, 5/2021). Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV: 1000 ppm 15 minutes.

**Biological exposure indices**

No exposure indices known.

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

**DNELs/DMELs**

Product/ingredient name	Type	Exposure	Value	Population	Effects
<b>MBS Transfection Kit Solution 1</b> Calcium chloride (CaCl <sub>2</sub> ), dihydrate	DNEL	Short term Inhalation	5 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	5 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	10 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	2.5 mg/m <sup>3</sup>	General population	Local
<b>MBS Transfection Kit Soltuion 3</b> ethanol	DNEL	Long term Inhalation	380 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Oral	87 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	114 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	206 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	343 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	950 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	1900 mg/m <sup>3</sup>	Workers	Local

**PNECs**

No PNECs available

## SECTION 8: Exposure controls/personal protection

### 8.2 Exposure controls

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

#### Individual protection measures

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

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

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

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

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

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

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

## SECTION 9: Physical and chemical properties

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

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	:	MBS Transfection Kit Solution 1	Liquid.
		MBS Transfection Kit Solution 2	Liquid.
		MBS Transfection Kit Soltuion 3	Liquid.
		pCMV $\beta$ -Gal Control Plasmid	Liquid.

<b>Colour</b>	:	MBS Transfection Kit Solution 1	Not available.
		MBS Transfection Kit Solution 2	Not available.
		MBS Transfection Kit Soltuion 3	Not available.
		pCMV $\beta$ -Gal Control Plasmid	Not available.

**SECTION 9: Physical and chemical properties**

<b>Odour</b>	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Soltuion 3	Not available.
	pCMV β-Gal Control Plasmid	Not available.
<b>Odour threshold</b>	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Soltuion 3	Not available.
	pCMV β-Gal Control Plasmid	Not available.
<b>Melting point/freezing point</b>	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	0°C
	MBS Transfection Kit Soltuion 3	Not available.
	pCMV β-Gal Control Plasmid	0°C
<b>Initial boiling point and boiling range</b>	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	100°C
	MBS Transfection Kit Soltuion 3	Not available.
	pCMV β-Gal Control Plasmid	100°C
<b>Flammability</b>	: MBS Transfection Kit Solution 1	Not applicable.
	MBS Transfection Kit Solution 2	Not applicable.
	MBS Transfection Kit Soltuion 3	Not applicable.
	pCMV β-Gal Control Plasmid	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: MBS Transfection Kit Solution 1	Not available.
	MBS Transfection Kit Solution 2	Not available.
	MBS Transfection Kit Soltuion 3	Not available.
	pCMV β-Gal Control Plasmid	Not available.

<b>Flash point</b>	:		<b>Closed cup</b>		<b>Open cup</b>	
		<b>Ingredient name</b>	<b>°C</b>	<b>Method</b>	<b>°C</b>	<b>Method</b>
		<b>MBS Transfection Kit Soltuion 3</b>				
		ethanol	9.7	Abel-Pensky	-	-
<b>Auto-ignition temperature</b>	:	<b>Ingredient name</b>	<b>°C</b>	<b>Method</b>		
		<b>MBS Transfection Kit Soltuion 3</b>				
		ethanol	455	DIN 51794		



**SECTION 9: Physical and chemical properties**

**Decomposition temperature** : MBS Transfection Kit Solution 1 Not available.  
 MBS Transfection Kit Solution 2 Not available.  
 MBS Transfection Kit Soltuion 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 Soltuion 3 Not available.  
 pCMV β-Gal Control Plasmid Not available.

**Viscosity** : MBS Transfection Kit Solution 1 Not available.  
 MBS Transfection Kit Solution 2 Not available.  
 MBS Transfection Kit Soltuion 3 Not available.  
 pCMV β-Gal Control Plasmid Not available.

<b>Solubility(ies)</b>	<b>Media</b>	<b>Result</b>
	<b>MBS Transfection Kit Solution 1</b> water	Soluble
	<b>MBS Transfection Kit Solution 2</b> water	Soluble
	<b>MBS Transfection Kit Soltuion 3</b> water	Soluble
	<b>pCMV β-Gal Control Plasmid</b> water	Soluble

**Partition coefficient: n-octanol/water** : MBS Transfection Kit Solution 1 Not applicable.  
 MBS Transfection Kit Solution 2 Not applicable.  
 MBS Transfection Kit Soltuion 3 Not applicable.  
 pCMV β-Gal Control Plasmid Not applicable.

<b>Vapour pressure</b>	<b>Ingredient name</b>	<b>Vapour Pressure at 20°C</b>			<b>Vapour pressure at 50°C</b>		
		<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>	<b>mm Hg</b>	<b>kPa</b>	<b>Method</b>
	<b>MBS Transfection Kit Solution 1</b> water	17.5	2.3	-	92.258	12.3	-
	<b>MBS Transfection Kit Solution 2</b> water	17.5	2.3	-	92.258	12.3	-
	<b>MBS Transfection Kit Soltuion 3</b> ethanol	42.94865	5.7	-	-	-	-

**SECTION 9: Physical and chemical properties**

<b>pCMV β-Gal Control Plasmid</b>							
water	17.5	2.3	-	92.258	12.3	-	

**Evaporation rate** : MBS Transfection Kit Solution 1 Not available.  
MBS Transfection Kit Solution 2 Not available.  
MBS Transfection Kit Soltuion 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 Soltuion 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 Soltuion 3 Not available.  
pCMV β-Gal Control Plasmid Not available.

**Explosive properties** : MBS Transfection Kit Solution 1 Not available.  
MBS Transfection Kit Solution 2 Not available.  
MBS Transfection Kit Soltuion 3 Not available.  
pCMV β-Gal Control Plasmid Not available.

**Oxidising properties** : MBS Transfection Kit Solution 1 Not available.  
MBS Transfection Kit Solution 2 Not available.  
MBS Transfection Kit Soltuion 3 Not available.  
pCMV β-Gal Control Plasmid Not available.

**Particle characteristics**

**Median particle size** : MBS Transfection Kit Solution 1 Not applicable.  
MBS Transfection Kit Solution 2 Not applicable.  
MBS Transfection Kit Soltuion 3 Not applicable.  
pCMV β-Gal Control Plasmid Not applicable.

**9.2 Other information**

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Solution 3 pCMV $\beta$ -Gal Control Plasmid	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Solution 3 pCMV $\beta$ -Gal Control Plasmid	The product is stable. The product is stable. The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Solution 3 pCMV $\beta$ -Gal Control Plasmid	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Solution 3 pCMV $\beta$ -Gal Control Plasmid	No specific data. No specific data. No specific data. No specific data.
<b>10.5 Incompatible materials</b>	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Solution 3 pCMV $\beta$ -Gal Control Plasmid	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
<b>10.6 Hazardous decomposition products</b>	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Solution 3 pCMV $\beta$ -Gal Control Plasmid	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
MBS Transfection Kit Solution 3 ethanol	LC50 Inhalation Vapour LD50 Oral	Rat Rat	124700 mg/m <sup>3</sup> 7 g/kg	4 hours -

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
MBS Transfection Kit Solution 3 ethanol	7000	N/A	N/A	124.7	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
MBS Transfection Kit Solution 3 ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	100 uL	-

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

MBS Transfection Kit Solution 1	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
MBS Transfection Kit Solution 2	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
MBS Transfection Kit Solution 3	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
pCMV β-Gal Control Plasmid	Not available.

Potential acute health effects

**SECTION 11: Toxicological information**

<b>Inhalation</b>	:	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 $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Ingestion</b>	:	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 $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Skin contact</b>	:	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 $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.
<b>Eye contact</b>	:	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 $\beta$ -Gal Control Plasmid	No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Inhalation</b>	:	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 $\beta$ -Gal Control Plasmid	No specific data.
<b>Ingestion</b>	:	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 $\beta$ -Gal Control Plasmid	No specific data.
<b>Skin contact</b>	:	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 $\beta$ -Gal Control Plasmid	No specific data.

**SECTION 11: Toxicological information**

<b>Eye contact</b>	: 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.

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

Short term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

Long term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

Potential chronic health effects

<b>Conclusion/Summary</b>	: Not available.	
<b>General</b>	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Soltuion 3 pCMV β-Gal Control Plasmid	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>	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Soltuion 3 pCMV β-Gal Control Plasmid	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>	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Soltuion 3 pCMV β-Gal Control Plasmid	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>Reproductive toxicity</b>	: MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 2 MBS Transfection Kit Soltuion 3 pCMV β-Gal Control Plasmid	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.

**11.2 Information on other hazards**



MBS Mammalian Transfection Kit, Part Number 200388

**SECTION 11: Toxicological information**

**11.2.1 Endocrine disrupting properties**

Not available.

**11.2.2 Other information**

MBS Transfection Kit Solution 2 Adverse symptoms may include the following: May cause skin sensitisation.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
<b>MBS Transfection Kit Solution 1</b> Calcium chloride (CaCl <sub>2</sub> ), dihydrate	Acute EC50 2900 mg/l Fresh water	Algae	72 hours
	Acute NOEC 2000 mg/l Fresh water	Daphnia	48 hours
<b>MBS Transfection Kit Soltuion 3</b> ethanol	Acute EC50 3306 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
	Acute EC50 1074 mg/l Fresh water	Crustaceans - <i>Cypris subglobosa</i>	48 hours
	Acute EC50 2 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 11000000 µg/l Marine water	Fish - <i>Alburnus alburnus</i>	96 hours
	Chronic NOEC 4.995 mg/l Marine water	Algae - <i>Ulva pertusa</i>	96 hours
Chronic NOEC 100 ul/L Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	21 days	

**12.2 Persistence and degradability**

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>MBS Transfection Kit Soltuion 3</b> ethanol	-	-	Readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>MBS Transfection Kit Soltuion 3</b> ethanol	-0.35	0.5	Low

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

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

**12.6 Endocrine disrupting properties**

Not available.

**12.7 Other adverse effects**

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

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

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

#### Packaging

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

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

## SECTION 14: Transport information

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

### Additional information

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

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

## SECTION 15: Regulatory information

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

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

##### Annex XIV - List of substances subject to authorisation

##### Annex XIV

None of the components are listed.

##### Substances of very high concern

None of the components are listed.

**SECTION 15: Regulatory information**

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

Product / Ingredient name	Identifiers	Designation [Usage]
MBS Transfection Kit Solution 1 MBS Transfection Kit Solution 1		3

<b>Label</b>	:	MBS Transfection Kit Solution 1	Not applicable.
		MBS Transfection Kit Solution 2	Not applicable.
		MBS Transfection Kit Soltuion 3	Not applicable.
		pCMV β-Gal Control Plasmid	Not applicable.

**Other EU regulations**

**Ozone depleting substances (1005/2009/EU)**

Not listed.

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

Not listed.

**Persistent Organic Pollutants**

Not listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

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

**SECTION 15: Regulatory information**

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

**SECTION 16: Other information**

Indicates information that has changed from previously issued version.

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

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

Classification	Justification
MBS Transfection Kit Solution 1 Eye Irrit. 2, H319	Calculation method

Full text of abbreviated H statements

MBS Transfection Kit Solution 1 H319	Causes serious eye irritation.
MBS Transfection Kit Soltuion 3 H225 H319	Highly flammable liquid and vapour. Causes serious eye irritation.

Full text of classifications [CLP/GHS]

MBS Transfection Kit Solution 1 Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
MBS Transfection Kit Soltuion 3 Eye Irrit. 2 Flam. Liq. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2

**Date of issue/ Date of revision** : 28/03/2024

**Date of previous issue** : No previous validation

**Version** : 1

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