

SAFETY DATA SHEET



ViraPack Transfection Kit, Part Number 200488

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

1.1 Product identifier

Product name : ViraPack Transfection Kit, Part Number 200488
Part no. (chemical kit) : 200488
Part no. : ViraPack Transfection Kit Solution 1 200488-51
ViraPack Transfection Kit Solution 2 200488-52
Virapack Transfection Kit Solution 3 200488-53
pCMV β -Gal Control Plasmid 200388-54

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

Material uses : Analytical reagent.
ViraPack Transfection Kit Solution 1 5 ml
ViraPack Transfection Kit Solution 2 25 ml
Virapack Transfection Kit Solution 3 40 ml
pCMV β -Gal Control Plasmid 0.04 ml (40 μ g 1 μ g/ μ l)

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
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

Product definition : ViraPack Transfection Kit Solution 1 Mixture
ViraPack Transfection Kit Solution 2 Mixture
Virapack Transfection Kit Solution 3 Mixture
pCMV β -Gal Control Plasmid Mixture

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


ViraPack
Transfection Kit
Solution 1
H319

SERIOUS EYE DAMAGE/EYE IRRITATION

Category 2

ViraPack Transfection Kit, Part Number 200488

SECTION 2: Hazards identification

| | | |
|---|--|---|
| Ingredients of unknown toxicity | : ViraPack 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% |
| | Virapack Transfection Kit Solution 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% |
| Ingredients of unknown ecotoxicity | :  Virapack Transfection Kit Solution 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 : ViraPack Transfection Kit Solution 1




Signal word : ViraPack Transfection Kit Solution 1 Warning
ViraPack Transfection Kit Solution 2 No signal word.
Virapack Transfection Kit Solution 3 No signal word.
pCMV β-Gal Control Plasmid No signal word.

Hazard statements : ViraPack Transfection Kit Solution 1 H319 - Causes serious eye irritation.
ViraPack Transfection Kit Solution 2 No known significant effects or critical hazards.
Virapack Transfection Kit Solution 3 No known significant effects or critical hazards.
pCMV β-Gal Control Plasmid No known significant effects or critical hazards.

Precautionary statements

Prevention :  ViraPack Transfection Kit Solution 1 P280 - Wear eye or face protection.
ViraPack Transfection Kit Solution 2 Not applicable.
Virapack Transfection Kit Solution 3 Not applicable.
pCMV β-Gal Control Plasmid Not applicable.

Response :  ViraPack 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.
ViraPack Transfection Kit Solution 2 Not applicable.
Virapack Transfection Kit Solution 3 Not applicable.
pCMV β-Gal Control Plasmid Not applicable.

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SECTION 2: Hazards identification

| | | |
|---|---|--|
| Storage | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β -Gal Control Plasmid | Not applicable. Not applicable. Not applicable. Not applicable. |
| Disposal | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β -Gal Control Plasmid | Not applicable. Not applicable. Not applicable. Not applicable. |
| Hazardous ingredients | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 | Not applicable. Not applicable. |
| Supplemental label elements | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β -Gal Control Plasmid | Not applicable. Safety data sheet available on request. Not applicable. Not applicable. |
| Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β -Gal Control Plasmid | Not applicable. Not applicable. Not applicable. Not applicable. |
| <u>Special packaging requirements</u> | | |
| Tactile warning of danger | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β -Gal Control Plasmid | Not applicable. Not applicable. Not applicable. Not applicable. |
| 2.3 Other hazards | | |
| Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β -Gal Control Plasmid | This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB. |

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SECTION 2: Hazards identification

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| Other hazards which do not result in classification | : ViraPack Transfection Kit Solution 1 | None known. |
| | ViraPack Transfection Kit Solution 2 | None known. |
| | Virapack Transfection Kit Solution 3 | None known. |
| | pCMV β-Gal Control Plasmid | None known. |
| | | |

SECTION 3: Composition/information on ingredients

| | | |
|-----------------------|---|---------|
| 3.1 Substances | : ViraPack Transfection Kit Solution 1 | Mixture |
| | ViraPack Transfection Kit Solution 2 | Mixture |
| | Virapack Transfection Kit Solution 3 | Mixture |
| | pCMV β-Gal Control Plasmid | Mixture |

| Product/ingredient name | Identifiers | % | Regulation (EC) No. 1272/2008 [CLP] | Type |
|---|---|-----------|---|------|
| ViraPack Transfection Kit Solution 1 Calcium chloride (CaCl ₂), dihydrate | EC: 233-140-8 CAS: 10035-04-8 Index: 017-013-00-2 | ≥25 - ≤50 | Eye Irrit. 2, H319 | [1] |
| ViraPack Transfection Kit Solution 2 Sodium chloride | EC: 231-598-3 CAS: 7647-14-5 | ≤3 | Eye Irrit. 2, H319 | [1] |
| Virapack Transfection Kit Solution 3 Ethanol | EC: 200-578-6 CAS: 64-17-5 Index: 603-002-00-5 | ≤3 | Flam. Liq. 2, H225 | [2] |
| | | | See Section 16 for the full text of the H statements declared above. | |

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.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of first aid measures

| | | |
|--------------------|---|---|
| Eye contact | : ViraPack 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. |
| | ViraPack 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. |
| | Virapack Transfection Kit Solution 3 | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove |

SECTION 4: First aid measures

| | | |
|---------------------|--|---|
| | | any contact lenses. Get medical attention if irritation occurs. 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 | pCMV β-Gal Control Plasmid | |
| | : ViraPack 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. |
| | ViraPack 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. |
| | Virapack Transfection Kit Solution 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. |
| Skin contact | 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. |
| | : ViraPack 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. |
| | ViraPack Transfection Kit Solution 2 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | Virapack Transfection Kit Solution 3 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| Ingestion | pCMV β-Gal Control Plasmid | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | : ViraPack 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. |
| | ViraPack 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. |
| | Virapack Transfection | Wash out mouth with water. Remove victim to fresh air and |

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SECTION 4: First aid measures

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|-----------------------------------|--|---|
| | Kit Solution 3 | 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. |
| Protection of first-aiders | : ViraPack 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. |
| | ViraPack Transfection Kit Solution 2 | No action shall be taken involving any personal risk or without suitable training. |
| | Virapack Transfection Kit Solution 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. |

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

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

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SECTION 4: First aid measures

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

4.3 Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

| | | |
|---------------------------------------|--|---|
| Suitable extinguishing media | : ViraPack Transfection Kit Solution 1 | Use an extinguishing agent suitable for the surrounding fire. |
| | : ViraPack Transfection Kit Solution 2 | Use an extinguishing agent suitable for the surrounding fire. |
| | : Virapack Transfection Kit Solution 3 | Use an extinguishing agent suitable for the surrounding fire. |
| | : pCMV β -Gal Control Plasmid | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | : ViraPack Transfection Kit Solution 1 | None known. |
| | : ViraPack Transfection Kit Solution 2 | None known. |
| | : Virapack Transfection Kit Solution 3 | None known. |
| | : pCMV β -Gal Control Plasmid | None known. |

5.2 Special hazards arising from the substance or mixture

| | | |
|--|--|---|
| Hazards from the substance or mixture | : ViraPack Transfection Kit Solution 1 | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | : ViraPack Transfection Kit Solution 2 | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | : Virapack Transfection Kit Solution 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 combustion products | : ViraPack Transfection Kit Solution 1 | Decomposition products may include the following materials: halogenated compounds metal oxide/oxides |
| | : ViraPack Transfection Kit Solution 2 | Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides |
| | : Virapack Transfection Kit Solution 3 | Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides |
| | : pCMV β -Gal Control Plasmid | No specific data. |

5.3 Advice for firefighters

| | | |
|--|--|---|
| Special precautions for fire-fighters | : ViraPack 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. |
| | : ViraPack 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. |
| | : Virapack Transfection Kit Solution 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. |

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SECTION 5: Firefighting measures

| | | |
|---|--|---|
| Special protective equipment for fire-fighters | : ViraPack 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. |
| | ViraPack 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. |
| | Virapack Transfection Kit Solution 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

| | | |
|------------------------------------|--|---|
| For non-emergency personnel | : ViraPack 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. |
| | ViraPack 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. |
| | Virapack Transfection Kit Solution 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 | : ViraPack 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". |
| | ViraPack 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". |
| | Virapack Transfection Kit Solution 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 |

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SECTION 6: Accidental release measures

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

6.2 Environmental precautions

| | |
|--------------------------------------|---|
| ViraPack 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). |
| ViraPack 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). |
| Virapack Transfection Kit Solution 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 caused environmental pollution (sewers, waterways, soil or air). |

6.3 Methods and material for containment and cleaning up

Methods for cleaning up

| | |
|--------------------------------------|---|
| ViraPack 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. |
| ViraPack 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. |
| Virapack Transfection Kit Solution 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. |

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

Protective measures

| | |
|--------------------------------------|--|
| ViraPack 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. |
| ViraPack Transfection Kit Solution 2 | Put on appropriate personal protective equipment (see Section 8). |
| Virapack Transfection Kit Solution 3 | Put on appropriate personal protective equipment (see Section 8). |
| pCMV β -Gal Control Plasmid | Put on appropriate personal protective equipment (see Section 8). |

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SECTION 7: Handling and storage

| | | |
|---|--|---|
| Advice on general occupational hygiene | : ViraPack 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. |
| | ViraPack 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. |
| | Virapack Transfection Kit Solution 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 β -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 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 | : ViraPack 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. |
| | ViraPack 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. |
| | Virapack Transfection Kit Solution 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 β -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 |

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SECTION 7: Handling and storage

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

7.3 Specific end use(s)

| | | |
|---|--|---|
| Recommendations | : ViraPack Transfection Kit Solution 1 | Industrial applications, Professional applications. |
| | ViraPack Transfection Kit Solution 2 | Industrial applications, Professional applications. |
| | Virapack Transfection Kit Solution 3 | Industrial applications, Professional applications. |
| | pCMV β-Gal Control Plasmid | Industrial applications, Professional applications. |
| Industrial sector specific solutions | : <input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack 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 |
|---|--|
| <input checked="" type="checkbox"/> Virapack Transfection Kit Solution 3 Ethanol | EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 1000 ppm 8 hours. TWA: 1920 mg/m ³ 8 hours. |

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. 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 |
|---|------|-------------------|---------------------|--------------------|----------|
| ViraPack Transfection Kit Solution 2 Sodium chloride | DNEL | Short term Oral | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 295.52 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 295.52 mg/kg bw/day | Workers | Systemic |

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SECTION 8: Exposure controls/personal protection

| | | | | | |
|--|------|-----------------------|---------------------------------------|--------------------|----------|
| | DNEL | Short term Inhalation | kg bw/day 443.28 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 443.28 mg/m ³ | General population | Systemic |
| | DNEL | Short term Inhalation | 2068.62 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 2068.62 mg/m ³ | Workers | Systemic |

PNECs

No PNECs available

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state : ViraPack Transfection Kit Solution 1 Liquid.
 ViraPack Transfection Kit Solution 2 Liquid.
 Virapack Transfection Kit Solution 3 Liquid.
 pCMV β-Gal Control Plasmid Liquid.

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SECTION 9: Physical and chemical properties

| | | |
|--|--|----------------|
| Colour | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Odour | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Odour threshold | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| pH | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | 6.95 |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Melting point/freezing point | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | 0°C |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | 0°C |
| | | |
| Initial boiling point and boiling range | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | 100°C |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | 100°C |
| | | |
| Flash point | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |

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SECTION 9: Physical and chemical properties

| | | |
|---|--|--|
| Evaporation rate | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Flammability (solid, gas) | : ViraPack Transfection Kit Solution 1 | Not applicable. |
| | ViraPack Transfection Kit Solution 2 | Not applicable. |
| | Virapack Transfection Kit Solution 3 | Not applicable. |
| | pCMV β -Gal Control Plasmid | Not applicable. |
| | | |
| Upper/lower flammability or explosive limits | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Vapour pressure | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Vapour density | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Relative density | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Solubility(ies) | : ViraPack Transfection Kit Solution 1 | Soluble in the following materials: cold water and hot water. |
| | ViraPack Transfection Kit Solution 2 | Easily soluble in the following materials: cold water and hot water. |
| | Virapack 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. |
| | | |

ViraPack Transfection Kit, Part Number 200488

SECTION 9: Physical and chemical properties

| | | |
|---|--|----------------|
| Partition coefficient: n-octanol/water | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Auto-ignition temperature | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Decomposition temperature | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Viscosity | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Explosive properties | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |
| Oxidising properties | : ViraPack Transfection Kit Solution 1 | Not available. |
| | ViraPack Transfection Kit Solution 2 | Not available. |
| | Virapack Transfection Kit Solution 3 | Not available. |
| | pCMV β -Gal Control Plasmid | Not available. |
| | | |

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

| | | |
|------------------------|--|--|
| 10.1 Reactivity | : ViraPack Transfection Kit Solution 1 | No specific test data related to reactivity available for this product or its ingredients. |
| | ViraPack Transfection Kit Solution 2 | No specific test data related to reactivity available for this product or its ingredients. |
| | Virapack Transfection Kit Solution 3 | No specific test data related to reactivity available for this product or its ingredients. |
| | pCMV β -Gal Control Plasmid | No specific test data related to reactivity available for this product or its ingredients. |
| | | |

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SECTION 10: Stability and reactivity

| | | |
|--|---|--|
| 10.2 Chemical stability | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β -Gal Control Plasmid | The product is stable. The product is stable. The product is stable. The product is stable. |
| 10.3 Possibility of hazardous reactions | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β -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. |
| 10.4 Conditions to avoid | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β -Gal Control Plasmid | No specific data. No specific data. No specific data. No specific data. |
| 10.5 Incompatible materials | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β -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. |
| 10.6 Hazardous decomposition products | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β -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 |
|---|-----------|---------|------------|----------|
| ViraPack Transfection Kit Solution 2 Sodium chloride | LD50 Oral | Rat | 3000 mg/kg | - |

Acute toxicity estimates

ViraPack Transfection Kit, Part Number 200488

SECTION 11: Toxicological information

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| ViraPack Transfection Kit Solution 2 Sodium chloride | 3000 | N/A | N/A | N/A | N/A |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|--------------------------|---------|-------|-----------------|-------------|
| ViraPack Transfection Kit Solution 2 Sodium chloride | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 mg | - |
| | Eyes - Moderate irritant | Rabbit | - | 10 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |

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

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

Potential acute health effects

| | | |
|------------|--------------------------------------|---|
| Inhalation | ViraPack Transfection Kit Solution 1 | No known significant effects or critical hazards. |
| | ViraPack Transfection Kit Solution 2 | No known significant effects or critical hazards. |
| | Virapack Transfection Kit Solution 3 | No known significant effects or critical hazards. |
| | pCMV β-Gal Control Plasmid | No known significant effects or critical hazards. |

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SECTION 11: Toxicological information

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

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

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SECTION 11: Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

| | | |
|------------------------------|--|--|
| General | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 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. |
| Carcinogenicity | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 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. |
| Mutagenicity | : ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 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. |
| Reproductive toxicity | : <input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 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. |
| Other information | : <input checked="" type="checkbox"/> ViraPack Transfection Kit Solution 1 ViraPack Transfection Kit Solution 2 Virapack Transfection Kit Solution 3 pCMV β-Gal Control Plasmid | Not available. Adverse symptoms may include the following: May cause skin sensitisation. Not available. Not available. |

SECTION 12: Ecological information

12.1 Toxicity

ViraPack Transfection Kit, Part Number 200488

SECTION 12: Ecological information

| Product/ingredient name | Result | Species | Exposure |
|---|---|--|--------------------------------|
| ViraPack 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 |
| ViraPack Transfection Kit Solution 2 Sodium chloride | Acute EC50 4.74 g/L Fresh water | Algae - Chlamydomonas reinhardtii | 96 hours |
| | Acute EC50 519.6 mg/l Fresh water | Crustaceans - Cypris subglobosa | 48 hours |
| | Acute IC50 6.87 g/L Fresh water | Aquatic plants - Lemna minor | 96 hours |
| | Acute LC50 1000000 µg/l Fresh water | Fish - Morone saxatilis - Larvae | 96 hours |
| | Chronic LC10 781 mg/l Fresh water | Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) | 3 weeks |
| | Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water | Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult | 96 hours 21 days 8 weeks |

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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 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.

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SECTION 13: Disposal considerations

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 | 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.

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

Label : ViraPack Transfection Kit Solution 1 Not applicable.
ViraPack Transfection Kit Solution 2 Not applicable.
Virapack Transfection Kit Solution 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.

Seveso Directive

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SECTION 15: Regulatory information

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

| | |
|--------------------------|--|
| Australia | : Not determined. |
| Canada | : Not determined. |
| China | : Not determined. |
| Europe | : Not determined. |
| Japan | : Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined. |
| New Zealand | : Not determined. |
| Philippines | : Not determined. |
| Republic of Korea | : Not determined. |
| Taiwan | : All components are listed or exempted. |
| Thailand | : Not determined. |
| Turkey | : Not determined. |
| United States | : Not determined. |
| Viet Nam | : Not determined. |

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 |
|--|--------------------|
| ViraPack Transfection Kit Solution 1 Eye Irrit. 2, H319 | Calculation method |

Full text of abbreviated H statements

ViraPack Transfection Kit, Part Number 200488

SECTION 16: Other information

| | |
|---|-------------------------------------|
| ViraPack Transfection Kit Solution 1 H319 | Causes serious eye irritation. |
| ViraPack Transfection Kit Solution 2 H319 | Causes serious eye irritation. |
| Virapack Transfection Kit Solution 3 H225 | Highly flammable liquid and vapour. |

[Full text of classifications \[CLP/GHS\]](#)

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

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Version : 3

[Notice to reader](#)

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