

SAFETY DATA SHEET



Gigapack III XL-7 Packaging Extract, Part Number 200208

Section 1. Identification

1.1 Product identifier

Product name : Gigapack III XL-7 Packaging Extract, Part Number 200208
Part no. (chemical kit) : 200208
Part no. : Gigapack III XL - 11 packaging extract 200207-41
 Wild-Type Lambda DNA c1857ind 1 Sam7 246203-51
 VCS257 E. coli Strain 200256-51
Validation date : 4/24/2024

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

Identified uses : Analytical reagent.
 Gigapack III XL - 11 packaging extract 0.175 ml
 Wild-Type Lambda DNA c1857ind 1 Sam7 0.005 ml (1.05 µg 0.21 µg/µl)
 VCS257 E. coli Strain 1 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

| | |
|---|--|
| OSHA/HCS status : Gigapack III XL - 11 packaging extract | While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product. |
| Wild-Type Lambda DNA c1857ind 1 Sam7 | While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product. |
| VCS257 E. coli Strain | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |

Classification of the substance or mixture

VCS257 E. coli Strain
 H320 EYE IRRITATION - Category 2B
 Gigapack III XL - 11 packaging extract Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 8%

2.2 GHS label elements

Signal word :

Section 2. Hazards identification

| | | |
|---|--|---|
| | Gigapack III XL - 11 packaging extract | No signal word. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No signal word. |
| | VCS257 E. coli Strain | Warning |
| Hazard statements | : Gigapack III XL - 11 packaging extract | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | H320 - Causes eye irritation. |
| <u>Precautionary statements</u> | | |
| Prevention | : Gigapack III XL - 11 packaging extract | Not applicable. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | VCS257 E. coli Strain | Not applicable. |
| Response | : Gigapack III XL - 11 packaging extract | Not applicable. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | VCS257 E. coli Strain | P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| Storage | : Gigapack III XL - 11 packaging extract | Not applicable. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | VCS257 E. coli Strain | Not applicable. |
| Disposal | : Gigapack III XL - 11 packaging extract | Not applicable. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | VCS257 E. coli Strain | Not applicable. |
| Supplemental label elements | : Gigapack III XL - 11 packaging extract | None known. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | None known. |
| | VCS257 E. coli Strain | None known. |
| <u>2.3 Other hazards</u> | | |
| Hazards not otherwise classified | : Gigapack III XL - 11 packaging extract | None known. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | None known. |
| | VCS257 E. coli Strain | None known. |

Section 3. Composition/information on ingredients

| | | |
|--------------------------|--|---------|
| Substance/mixture | : Gigapack III XL - 11 packaging extract | Mixture |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Mixture |
| | VCS257 E. coli Strain | Mixture |

Section 3. Composition/information on ingredients

| Ingredient name | % | CAS number |
|-----------------------|-----------|------------|
| VCS257 E. coli Strain | | |
| Glycerol | ≥10 - ≤25 | 56-81-5 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

| | | |
|---------------------|--|--|
| Eye contact | : Gigapack III XL - 11 packaging extract | 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. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | 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. |
| | VCS257 E. coli Strain | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention. |
| Inhalation | : Gigapack III XL - 11 packaging extract | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | VCS257 E. coli Strain | 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. |
| Skin contact | : Gigapack III XL - 11 packaging extract | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | VCS257 E. coli Strain | 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. |

Section 4. First aid measures

| | | |
|------------------|--|--|
| Ingestion | : Gigapack III XL - 11 packaging extract | 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. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | 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. |
| | VCS257 E. coli Strain | 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. |

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

| | | |
|---------------------|--|---|
| Eye contact | : Gigapack III XL - 11 packaging extract | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | Causes eye irritation. |
| Inhalation | : Gigapack III XL - 11 packaging extract | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |
| Skin contact | : Gigapack III XL - 11 packaging extract | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |
| Ingestion | : Gigapack III XL - 11 packaging extract | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |

Over-exposure signs/symptoms

| | | |
|--------------------|--|--|
| Eye contact | : Gigapack III XL - 11 packaging extract | No specific data. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No specific data. |
| | VCS257 E. coli Strain | Adverse symptoms may include the following: irritation watering redness |

Section 4. First aid measures

| | | |
|---------------------|--|---|
| Inhalation | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | No specific data. No specific data. No specific data. |
| Skin contact | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | No specific data. No specific data. No specific data. |
| Ingestion | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | No specific data. No specific data. No specific data. |

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

| | | |
|-----------------------------------|--|---|
| Notes to physician | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | No specific treatment. No specific treatment. No specific treatment. |
| Protection of first-aiders | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. |

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

| | | |
|---------------------------------------|--|---|
| Suitable extinguishing media | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | None known. None known. None known. |

Section 5. Fire-fighting measures

5.2 Special hazards arising from the substance or mixture

| | | |
|---|--|--|
| Specific hazards arising from the chemical | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. |
| Hazardous thermal decomposition products | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | Decomposition products may include the following materials: carbon dioxide carbon monoxide No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides |

5.3 Advice for firefighters

| | | |
|---|--|---|
| Special protective actions for fire-fighters | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | 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. 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. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Special protective equipment for fire-fighters | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

| | | |
|------------------------------------|---|--|
| For non-emergency personnel | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. 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 |
|------------------------------------|---|--|

Section 6. Accidental release measures

VCS257 E. coli Strain

touch or walk through spilled material. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : Gigapack III XL - 11 packaging extract

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Wild-Type Lambda DNA c1857ind
1 Sam7

VCS257 E. coli Strain

6.2 Environmental precautions

: Gigapack III XL - 11 packaging extract

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Wild-Type Lambda DNA c1857ind
1 Sam7

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

VCS257 E. coli Strain

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Gigapack III XL - 11 packaging extract

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.

Wild-Type Lambda DNA c1857ind
1 Sam7

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.

VCS257 E. coli Strain

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

| | | |
|--|--|---|
| <p>Protective measures</p> | <p>: Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain</p> | <p>Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.</p> |
| <p>Advice on general occupational hygiene</p> | <p>: Gigapack III XL - 11 packaging extract</p> <p>Wild-Type Lambda DNA c1857ind 1 Sam7</p> <p>VCS257 E. coli Strain</p> | <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. 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. Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> |
| <p>7.2 Conditions for safe storage, including any incompatibilities</p> | <p>: Gigapack III XL - 11 packaging extract</p> <p>Wild-Type Lambda DNA c1857ind 1 Sam7</p> | <p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled</p> |

Section 7. Handling and storage

VCS257 E. coli Strain

containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

| | | |
|---|--|---|
| Recommendations | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. |
| Industrial sector specific solutions | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | Not available. Not available. Not available. |

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|-----------------------------------|---|
| VCS257 E. coli Strain Glycerol | OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 5/2018). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust CAL OSHA PEL (United States, 5/2018). TWA: 5 mg/m ³ 8 hours. Form: respirable fraction TWA: 10 mg/m ³ 8 hours. Form: total dust |

Biological exposure indices

No exposure indices known.

8.2 Exposure controls

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

Section 8. Exposure controls/personal protection

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

Individual protection measures

Hygiene measures : Handle as biohazard material (Biosafety level 1). Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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

Skin protection

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

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

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

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

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

| | | |
|-----------------------|--|----------------|
| Physical state | : Gigapack III XL - 11 packaging extract | Liquid. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Liquid. |
| | VCS257 E. coli Strain | Liquid. |
| Color | : Gigapack III XL - 11 packaging extract | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | VCS257 E. coli Strain | Not available. |
| Odor | : Gigapack III XL - 11 packaging extract | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | VCS257 E. coli Strain | Not available. |
| Odor threshold | : Gigapack III XL - 11 packaging extract | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | VCS257 E. coli Strain | Not available. |

Section 9. Physical and chemical properties and safety characteristics

| | | |
|--|--|----------------|
| pH | : Gigapack III XL - 11 packaging extract | 8 |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | 7 |
| | VCS257 E. coli Strain | 7 |
| Melting point/freezing point | : Gigapack III XL - 11 packaging extract | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | 0°C (32°F) |
| | VCS257 E. coli Strain | Not available. |
| Boiling point, initial boiling point, and boiling range | : Gigapack III XL - 11 packaging extract | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | 100°C (212°F) |
| | VCS257 E. coli Strain | Not available. |

| | | | | | | | | |
|--------------------|---|------------------------|-----------|-----------|-----------------|-----------|-----------|---------------|
| Flash point | : | Closed cup | | | Open cup | | | |
| | | Ingredient name | °C | °F | Method | °C | °F | Method |
| | | VCS257 E. coli Strain | | | | | | |
| | | Glycerol | - | - | - | 177 | 350.6 | - |

| | | |
|-------------------------|--|----------------|
| Evaporation rate | : Gigapack III XL - 11 packaging extract | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | VCS257 E. coli Strain | Not available. |

| | | |
|---------------------|--|-----------------|
| Flammability | : Gigapack III XL - 11 packaging extract | Not applicable. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | VCS257 E. coli Strain | Not applicable. |

| | | |
|---|--|----------------|
| Lower and upper explosion limit/flammability limit | : Gigapack III XL - 11 packaging extract | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | VCS257 E. coli Strain | Not available. |

| | | | | | | | | |
|-----------------------|---|--|--------------|------------|-------------------------------|--------------|------------|---------------|
| Vapor pressure | : | Vapor Pressure at 20°C | | | Vapor pressure at 50°C | | | |
| | | Ingredient name | mm Hg | kPa | Method | mm Hg | kPa | Method |
| | | Gigapack III XL - 11 packaging extract | | | | | | |
| | | water | 17.5 | 2.3 | - | 92.258 | 12.3 | - |
| | | Wild-Type Lambda DNA c1857ind 1 Sam7 | | | | | | |
| | | water | 17.5 | 2.3 | - | 92.258 | 12.3 | - |
| | | VCS257 E. coli Strain | | | | | | |

Section 9. Physical and chemical properties and safety characteristics

| | | | | | | |
|----------|----------|---------|---|--------|---------|---|
| water | 17.5 | 2.3 | - | 92.258 | 12.3 | - |
| Glycerol | 0.000075 | 0.00001 | - | 0.0025 | 0.00033 | - |

Relative vapor density : Gigapack III XL - 11 packaging extract Not available.

Wild-Type Lambda DNA c1857ind 1 Sam7 Not available.

VCS257 E. coli Strain Not available.

Relative density : Gigapack III XL - 11 packaging extract Not available.

Wild-Type Lambda DNA c1857ind 1 Sam7 Not available.

VCS257 E. coli Strain Not available.

Solubility(ies)

| Media | Result |
|--|---------|
| Gigapack III XL - 11 packaging extract | Soluble |
| water | |
| Wild-Type Lambda DNA c1857ind 1 Sam7 | |
| water | Soluble |
| VCS257 E. coli Strain | Soluble |
| water | |

Partition coefficient: n-octanol/water : Gigapack III XL - 11 packaging extract Not applicable.

Wild-Type Lambda DNA c1857ind 1 Sam7 Not applicable.

VCS257 E. coli Strain Not applicable.

Auto-ignition temperature

| Ingredient name | °C | °F | Method |
|-----------------------|-----|-----|--------|
| VCS257 E. coli Strain | | | |
| Glycerol | 370 | 698 | - |

Decomposition temperature : Gigapack III XL - 11 packaging extract Not available.

Wild-Type Lambda DNA c1857ind 1 Sam7 Not available.

VCS257 E. coli Strain Not available.

Viscosity

: Gigapack III XL - 11 packaging extract Not available.

Wild-Type Lambda DNA c1857ind 1 Sam7 Not available.

VCS257 E. coli Strain Not available.

Particle characteristics

Median particle size : Gigapack III XL - 11 packaging extract Not applicable.

Wild-Type Lambda DNA c1857ind 1 Sam7 Not applicable.

VCS257 E. coli Strain Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity

: Gigapack III XL - 11 packaging extract No specific test data related to reactivity available for this product or its ingredients.

Wild-Type Lambda DNA c1857ind 1 Sam7 No specific test data related to reactivity available for this product or its ingredients.

VCS257 E. coli Strain No specific test data related to reactivity available for this product or its ingredients.

Section 10. Stability and reactivity

| | | |
|--|--|--|
| 10.2 Chemical stability | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | The product is stable. The product is stable. The product is stable. |
| 10.3 Possibility of hazardous reactions | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | 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 | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | No specific data. No specific data. No specific data. |
| 10.5 Incompatible materials | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. |
| 10.6 Hazardous decomposition products | : Gigapack III XL - 11 packaging extract Wild-Type Lambda DNA c1857ind 1 Sam7 VCS257 E. coli Strain | 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 |
|-----------------------------------|-----------|---------|-------------|----------|
| VCS257 E. coli Strain Glycerol | LD50 Oral | Rat | 12600 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-----------------------------------|----------------------|---------|-------|-----------------|-------------|
| VCS257 E. coli Strain Glycerol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |

Sensitization

Not available.

Conclusion/Summary

Skin

: **Gigapack III packaging extract:** May cause sensitization by skin contact.

Section 11. Toxicological information

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 the likely routes of exposure :  Gigapack III XL - 11 packaging extract
Wild-Type Lambda DNA c1857ind
1 Sam7
VCS257 E. coli Strain

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
Not available.

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact :  Gigapack III XL - 11 packaging extract
Wild-Type Lambda DNA c1857ind
1 Sam7
VCS257 E. coli Strain

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

Inhalation : Gigapack III XL - 11 packaging extract
Wild-Type Lambda DNA c1857ind
1 Sam7
VCS257 E. coli Strain

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

Skin contact : Gigapack III XL - 11 packaging extract
Wild-Type Lambda DNA c1857ind
1 Sam7
VCS257 E. coli Strain

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

Ingestion : Gigapack III XL - 11 packaging extract
Wild-Type Lambda DNA c1857ind
1 Sam7
VCS257 E. coli Strain

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

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact :  Gigapack III XL - 11 packaging extract
Wild-Type Lambda DNA c1857ind
1 Sam7
VCS257 E. coli Strain

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

Section 11. Toxicological information

| | | |
|---------------------|--|-------------------|
| Inhalation | : Gigapack III XL - 11 packaging extract | No specific data. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No specific data. |
| | VCS257 E. coli Strain | No specific data. |
| Skin contact | : Gigapack III XL - 11 packaging extract | No specific data. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No specific data. |
| | VCS257 E. coli Strain | No specific data. |
| Ingestion | : Gigapack III XL - 11 packaging extract | No specific data. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No specific data. |
| | VCS257 E. coli Strain | No specific data. |

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

| | | |
|------------------------------|--|---|
| General | : Gigapack III XL - 11 packaging extract | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |
| Carcinogenicity | : Gigapack III XL - 11 packaging extract | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |
| Mutagenicity | : Gigapack III XL - 11 packaging extract | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |
| Reproductive toxicity | : Gigapack III XL - 11 packaging extract | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|-------------------|----------------|--------------------------|----------------------------|-------------------------------------|
| VCS257 E. coli Strain VCS257 E. coli Strain Glycerol | 300000.0 12600 | N/A N/A | N/A N/A | N/A N/A | N/A N/A |

Other information :  Gigapack III XL - 11 packaging extract Adverse symptoms may include the following: May cause skin sensitization.

Section 12. Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|--|-----------------------------------|-----------------------------------|----------|
| VCS257 E. coli Strain Glycerol | Acute LC50 54000 mg/l Fresh water | Fish - <i>Oncorhynchus mykiss</i> | 96 hours |

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|--|--|----------------|------|----------|
| VCS257 E. coli Strain Glycerol | 301D Ready Biodegradability - Closed Bottle Test | 93 % - 30 days | - | - |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|-----|-----------|
| VCS257 E. coli Strain Glycerol | -1.76 | - | Low |

12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 13. Disposal considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

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

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
Clean Water Act (CWA) 311: Edetic acid

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

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification :  Gigapack III XL - 11 packaging extract
Wild-Type Lambda DNA c1857ind 1 Sam7
VCS257 E. coli Strain
Not applicable.
Not applicable.
EYE IRRITATION - Category 2B

Composition/information on ingredients

Section 15. Regulatory information

| Name | % | Classification |
|---|-----------|------------------------------|
| <input checked="" type="checkbox"/> Gigapack III XL - 11 packaging extract Sucrose | ≤10 | COMBUSTIBLE DUSTS |
| <input checked="" type="checkbox"/> VCS257 E. coli Strain Glycerol | ≥10 - ≤25 | EYE IRRITATION - Category 2B |

State regulations

- Massachusetts** : The following components are listed: GLYCERINE MIST; SUCROSE DUST
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: GLYCERIN
- Pennsylvania** : The following components are listed: 1,2,3-PROPANETRIOL; .ALPHA.-D-GLUCOPYRANOSIDE, .BETA.-D-FRUCTOFURANOSYL

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

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** : At least one component is not listed in DSL but all such components are listed in NDSL.
- China** : All components are listed or exempted.
- Japan** : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.
- New Zealand** : All components are listed or exempted.
- Philippines** : Not determined.
- Republic of Korea** : Not determined.
- Taiwan** : All components are listed or exempted.
- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : All components are active or exempted.
- Viet Nam** : All components are listed or exempted.

Section 16. Other information

[Procedure used to derive the classification](#)

| Classification | Justification |
|--|--------------------|
| ✓ VCS257 E. coli Strain EYE IRRITATION - Category 2B | Calculation method |

[History](#)

Date of issue/Date of revision : 04/24/2024

Date of previous issue : 04/29/2021

Version : 7

[Key to abbreviations](#)

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

✓ Indicates information that has changed from previously issued version.

[Notice to reader](#)

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