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

1.1 Product identifier
Product name: MitoXpress Xtra –Oxygen Consumption Assay, Part Number MX-200-4
Part no. (chemical kit): MX-200-4
Part no.: MitoXpress Xtra Reagent Pack MX-400-4
MitoXpress HS Mineral Oil Pack HS-100D-4

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses: For research use only. Not for use in diagnostic procedures (RUO).
MitoXpress Xtra Reagent Pack 4 x 70 µg
MitoXpress HS Mineral Oil Pack 4 x 15 ml

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: MitoXpress Xtra Mixture
Reagent Pack
MitoXpress HS Mineral Oil Pack Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
MitoXpress HS Mineral Oil Pack
H315 SKIN CORROSION/IRRITATION - Category 2
H411 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

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: MitoXpress HS Mineral Oil Pack

Date of issue/Date of revision: 23/04/2018
### SECTION 2: Hazards identification

<table>
<thead>
<tr>
<th>Signal word</th>
<th>MitoXpress Xtra Reagent Pack</th>
<th>No signal word.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>Warning</td>
</tr>
<tr>
<td>Hazard statements</td>
<td>MitoXpress Xtra Reagent Pack</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>H315 - Causes skin irritation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H411 - Toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>Precautionary statements</td>
<td>MitoXpress Xtra Reagent Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P273 - Avoid release to the environment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P264 - Wash hands thoroughly after handling.</td>
</tr>
<tr>
<td>Response</td>
<td>MitoXpress Xtra Reagent Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P332 + P313 - If skin irritation occurs: Get medical attention.</td>
</tr>
<tr>
<td>Storage</td>
<td>MitoXpress Xtra Reagent Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Disposal</td>
<td>MitoXpress Xtra Reagent Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.</td>
</tr>
<tr>
<td>Hazardous ingredients</td>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Supplemental label elements</td>
<td>MitoXpress Xtra Reagent Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</td>
<td>MitoXpress Xtra Reagent Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special packaging requirements</td>
<td>MitoXpress Xtra Reagent Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Tactile warning of danger</td>
<td>MitoXpress Xtra Reagent Pack</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

2.3 Other hazards

- **Other hazards which do not result in classification**
  - MitoXpress Xtra Reagent Pack
  - MitoXpress HS Mineral Oil Pack
  - May form explosive dust-air mixture if dispersed.

- **MitoXpress HS Mineral Oil Pack**
  - None known.
SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EC: 247-477-3 CAS: 26140-60-3</td>
<td>≤10</td>
<td>Aquatic Chronic 1, H410 (M=1)</td>
<td>[1][2]</td>
</tr>
<tr>
<td>Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene) terphenyl</td>
<td></td>
<td></td>
<td>See Section 16 for the full text of the H statements declared above.</td>
<td></td>
</tr>
</tbody>
</table>

Type
[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress Xtra Reagent Pack</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>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.</td>
</tr>
</tbody>
</table>

Inhalation

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress Xtra Reagent Pack</td>
<td>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>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.</td>
</tr>
</tbody>
</table>

Skin contact

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress Xtra Reagent Pack</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.</td>
</tr>
</tbody>
</table>

Ingestion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress Xtra Reagent Pack</td>
<td>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.</td>
</tr>
<tr>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>Wash out mouth with water. Remove dentures if any.</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

Oil Pack

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.

Protection of first-aiders

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

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Inhalation</th>
<th>Skin contact</th>
<th>Ingestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.</td>
<td>Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.</td>
<td>Causes skin irritation.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Over-exposure signs/symptoms

Eye contact

MitoXpress Xtra Reagent Pack

Adverse symptoms may include the following:

irritation

MitoXpress HS Mineral Oil Pack

Adverse symptoms may include the following:

pain or irritation

Inhalation

MitoXpress Xtra Reagent Pack

Adverse symptoms may include the following:

respiratory tract irritation

coughing

MitoXpress HS Mineral Oil Pack

No specific data.

Date of issue/Date of revision : 23/04/2018
SECTION 4: First aid measures

**Notes to physician**

MitoXpress Xtra Reagent Pack
- Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

MitoXpress HS Mineral Oil Pack
- Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**

**Skin contact**
- MitoXpress Xtra Reagent Pack
- MitoXpress HS Mineral Oil Pack
- No specific data.

**Ingestion**
- MitoXpress Xtra Reagent Pack
- MitoXpress HS Mineral Oil Pack
- No specific data.

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

**Notes to physician**

MitoXpress Xtra Reagent Pack
- Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

MitoXpress HS Mineral Oil Pack
- Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**

MitoXpress Xtra Reagent Pack
- No specific treatment.

MitoXpress HS Mineral Oil Pack
- No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media**
- MitoXpress Xtra Reagent Pack
- MitoXpress HS Mineral Oil Pack
- Use dry chemical powder.

**Unsuitable extinguishing media**
- MitoXpress Xtra Reagent Pack
- MitoXpress HS Mineral Oil Pack
- Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.

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

**Hazard from the substance or mixture**
- MitoXpress Xtra Reagent Pack
- MitoXpress HS Mineral Oil Pack
- May form explosible dust-air mixture if dispersed.

**Hazardous combustion products**
- MitoXpress Xtra Reagent Pack
- MitoXpress HS Mineral Oil Pack
- Decomposition products may include the following materials:
  - carbon dioxide
  - carbon monoxide

**5.3 Advice for firefighters**

**Special precautions for fire-fighters**
- MitoXpress Xtra Reagent Pack
- MitoXpress HS Mineral Oil Pack
- 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.

- Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- 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.
SECTION 5: Firefighting measures

Special protective equipment for fire-fighters:

MitoXpress Xtra Reagent Pack
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.

MitoXpress HS Mineral Oil Pack
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:

MitoXpress Xtra Reagent Pack
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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Put on appropriate personal protective equipment.

MitoXpress HS Mineral Oil Pack
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.

For emergency responders:

MitoXpress Xtra Reagent Pack
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".

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

6.2 Environmental precautions

MitoXpress Xtra Reagent Pack
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).

MitoXpress HS Mineral Oil Pack
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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up:

MitoXpress Xtra Reagent Pack
Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

MitoXpress HS Mineral Oil Pack
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.

Date of issue/Date of revision: 23/04/2018
SECTION 6: Accidental release measures

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**

- **MitoXpress Xtra Reagent Pack**: Put on appropriate personal protective equipment (see Section 8). Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material.

- **MitoXpress HS Mineral Oil Pack**: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. 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.

**Advice on general occupational hygiene**

- **MitoXpress Xtra Reagent Pack**: 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.

- **MitoXpress HS Mineral Oil Pack**: 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**

- **MitoXpress Xtra Reagent Pack**: Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Shelf life: 24 months. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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.

- **MitoXpress HS Mineral Oil Pack**: Storage temperature: 20 to 25°C (68 to 77°F). Store in accordance with local regulations. Shelf life: >24 months. 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...
SECTION 7: Handling and storage

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.

Danger criteria

<table>
<thead>
<tr>
<th>Category</th>
<th>Notification and MAPP threshold</th>
<th>Safety report threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress HS Mineral Oil Pack E2</td>
<td>200</td>
<td>500</td>
</tr>
</tbody>
</table>

7.3 Specific end use(s)

Recommendations:


SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress HS Mineral Oil Pack terphenyl</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 4.8 mg/m³ 15 minutes. STEL: 0.5 ppm 15 minutes.</td>
</tr>
</tbody>
</table>

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

No DNELs/DMELs available.

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
SECTION 8: Exposure controls/personal protection

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

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

Skin protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Hand 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.

Body 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.

Other skin 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.

Respiratory protection: 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**: MitoXpress Xtra Reagent Pack Solid. [lyophilised]
  MitoXpress HS Mineral Oil Pack Liquid.
- **Colour**: Not available.
- **Odour**: Not available.
- **Odour threshold**: Not available.
- **pH**: Not available.
**SECTION 9: Physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>MitoXpress Xtra Reagent Pack</th>
<th>MitoXpress HS Mineral Oil Pack</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Melting point/freezing point</strong></td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Initial boiling point and boiling range</strong></td>
<td>Not available.</td>
<td>340°C</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Not available.</td>
<td>Open cup: &gt;163°C</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not available.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Upper/lower flammability or explosive limits</strong></td>
<td>Not available.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Solubility(ies)</strong></td>
<td>Not available.</td>
<td>Insoluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Date of issue/Date of revision: 23/04/2018
### SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explosive properties</strong></td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td><strong>Oxidising properties</strong></td>
<td>Not available.</td>
<td></td>
</tr>
</tbody>
</table>

#### 9.2 Other information
No additional information.

### SECTION 10: Stability and reactivity

<table>
<thead>
<tr>
<th>Subsection</th>
<th>MitoXpress Xtra Reagent Pack</th>
<th>MitoXpress HS Mineral Oil Pack</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10.1 Reactivity</strong></td>
<td></td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No specific test data related to reactivity available for this product or its ingredients.</td>
</tr>
<tr>
<td><strong>10.2 Chemical stability</strong></td>
<td></td>
<td>The product is stable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The product is stable.</td>
</tr>
<tr>
<td><strong>10.3 Possibility of hazardous reactions</strong></td>
<td></td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under normal conditions of storage and use, hazardous reactions will not occur.</td>
</tr>
<tr>
<td><strong>10.4 Conditions to avoid</strong></td>
<td></td>
<td>Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Prevent dust accumulation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>10.5 Incompatible materials</strong></td>
<td></td>
<td>Reactive or incompatible with the following materials:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>oxidizing materials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>May react or be incompatible with oxidising materials.</td>
</tr>
<tr>
<td><strong>10.6 Hazardous decomposition products</strong></td>
<td></td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
</tr>
</tbody>
</table>

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

**Acute toxicity**

**Date of issue/Date of revision**: 23/04/2018
### SECTION 11: Toxicological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>&gt;19171 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)</td>
<td>LD50 Oral</td>
<td>Rat - Male, Female</td>
<td>&gt;10000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>terphenyl</td>
<td>LD50 Dermal</td>
<td>Rabbit - Male, Female</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1400 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Irritation/Corrosion

**Conclusion/Summary**: Not available.

#### 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.

#### Information on likely routes of exposure

**Conclusion/Summary**: Not available.

**MitoXpress Xtra Reagent Pack**

Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects

**Inhalation**

- **MitoXpress Xtra Reagent Pack**: Adverse symptoms may include the following:
  - Respiratory tract irritation
  - Coughing

- **MitoXpress HS Mineral Oil Pack**: No known significant effects or critical hazards.

**Ingestion**

- **MitoXpress Xtra Reagent Pack**: No known significant effects or critical hazards.

- **MitoXpress HS Mineral Oil Pack**: No known significant effects or critical hazards.

**Skin contact**

- **MitoXpress Xtra Reagent Pack**: Causes skin irritation.

- **MitoXpress HS Mineral Oil Pack**: No known significant effects or critical hazards.

**Eye contact**

- **MitoXpress Xtra Reagent Pack**: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

- **MitoXpress HS Mineral Oil Pack**: No known significant effects or critical hazards.

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

**Inhalation**

- **MitoXpress Xtra Reagent Pack**
  - Adverse symptoms may include the following:
  - Respiratory tract irritation
  - Coughing

- **MitoXpress HS Mineral Oil Pack**: No specific data.

Date of issue/Date of revision: 23/04/2018
### SECTION 11: Toxicological information

#### Ingestion

- **MitoXpress Xtra Reagent Pack**: No specific data.
- **MitoXpress HS Mineral Oil Pack**: No specific data.

#### Skin contact

- **MitoXpress Xtra Reagent Pack**: No specific data.
- **MitoXpress HS Mineral Oil Pack**: Adverse symptoms may include the following:
  - irritation
  - redness

#### Eye contact

- **MitoXpress Xtra Reagent Pack**: Adverse symptoms may include the following:
  - irritation
  - redness
- **MitoXpress HS Mineral Oil Pack**: Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness

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

##### Short term exposure

- **Potential immediate effects**: Not available.
- **Potential delayed effects**: Not available.

##### Long term exposure

- **Potential immediate effects**: Not available.
- **Potential delayed effects**: Not available.

##### Potential chronic health effects

- **General**: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. No known significant effects or critical hazards.
- **Carcinogenicity**: No known significant effects or critical hazards.
- **Mutagenicity**: No known significant effects or critical hazards.
- **Teratogenicity**: No known significant effects or critical hazards.
- **Developmental effects**: No known significant effects or critical hazards.
- **Fertility effects**: No known significant effects or critical hazards.
SECTION 12: Ecological information

12.1 Toxicity

**Conclusion/Summary**: Not available.

12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>OECD 301B Ready Biodegradability - CO2 Evolution Test</td>
<td>99.9 % - 28 days</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress HS Mineral Oil Pack</td>
<td>7.6 to 7.8</td>
<td>314 to 1882</td>
<td>high</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

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

12.5 Results of PBT and vPvB assessment

- **PBT**: Not applicable.
- **vPvB**: Not applicable.

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**

- **Packaging**: The classification of the product may meet the criteria for a hazardous waste.

**Date of issue/Date of revision**: 23/04/2018
SECTION 13: Disposal considerations

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

Special precautions: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

ADR/RID / IMDG / IATA: Not regulated.

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 Annex II of Marpol and the IBC Code: 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

MitoXpress Xtra Reagent Pack: Not applicable.
MitoXpress HS Mineral Oil Pack: Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)
Not listed.

Prior Informed Consent (PIC) (649/2012/EU)
Not listed.

Seveso Directive
This product is controlled under the Seveso Directive.

Danger criteria

Category
MitoXpress HS Mineral Oil Pack
E2

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals
Not listed.

Montreal Protocol (Annexes A, B, C, E)
Not listed.
SECTION 15: Regulatory information

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.
- Malaysia: Not determined.
- New Zealand: Not determined.
- Philippines: Not determined.
- Republic of Korea: Not determined.
- Taiwan: Not determined.
- 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]
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress HS Mineral Oil Pack Skin Irrit. 2, H315</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 2, H411</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Full text of abbreviated H statements

MitoXpress HS Mineral Oil Pack
H304  May be fatal if swallowed and enters airways.
H315  Causes skin irritation.
H410  Very toxic to aquatic life with long lasting effects.
H411  Toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]
**SECTION 16: Other information**

<table>
<thead>
<tr>
<th>MitoXpress HS Mineral Oil Pack</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Chronic 1, H410</td>
<td>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 2, H411</td>
<td>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2</td>
</tr>
<tr>
<td>Asp. Tox. 1, H304</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
<td>SKIN CORROSION/IRRITATION - Category 2</td>
</tr>
</tbody>
</table>

**Date of issue/ Date of revision**: 23/04/2018

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

**Version**: 1

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