

Section 1: Identification of the mixture and of the company/undertaking

1.1. Product identifier:

- Frozen and Living Cell Cultures (Biosafety Level, BSL 1 and 2)
- BSL2 cell lines categorized according to TRBA 468 and German IfSG (Infektions-Schutz-Gesetz, Germany).

1.2. Relevant identified uses of the mixture and uses advised against:

- For in vitro research use only. For professional, industrial use.
- Not for use in human, therapeutic, or diagnostic applications.

1.3. Details of the supplier of the safety data sheet:

German Headquarters:

- **Company Name:** Cytion GmbH
- **Address:** Dr.-Eckener-Str. 8, 69214 Eppelheim, Germany
- **Telephone:** +49(0)6221-405780
- **Email:** info@cytion.com
- **Responsible person:** Jonathan Steubing

US Office:

- **Company Name:** Cell Lines Service LLC, d/b/a Cytion

- **Chemical hazards:**
 - Frozen cell cultures may contain 5 to 10% (v/v) dimethyl sulphoxide (DMSO). DMSO may be harmful if in contact with skin or ingested and is irritating to eyes and the respiratory system. Avoid contact with skin, eyes, digestive, and respiratory systems if thawed. PPE is required.
- **Physical hazards:**
 - Frozen vials may be pressurized due to trapped liquid nitrogen, posing a risk of explosion upon warming, especially if shipped in a liquid nitrogen container. Wear protective equipment when handling such packages.

Classification according to Regulation (EC) No 1272/2008 (CLP):

- Not considered a hazardous mixture. No hazard statements.

2.2. Label elements:

- **Hazard statements:** None.
- **Precautionary statements:** None.

2.3. Other hazards:

- **PBT and vPvB assessment:** No data available.

- If the person is unconscious, seek emergency medical attention.
 - Remove the person to fresh air.
- **Skin contact:**
 - Wash off immediately with plenty of water and soap.
 - Remove all contaminated clothing.
- **Eye contact:**
 - Flush eyes immediately with water for 10-15 minutes.

4.2. Most important symptoms and effects, both acute and delayed:

- Refer to Section 11.

4.3. Indication of any immediate medical attention and special treatment needed:

- No special treatment needed; treat symptomatically.
- If exposed or concerned: Report to your Safety Officer and seek medical advice immediately.

Section 5: Firefighting measures

5.1. Extinguishing media:

- **Suitable extinguishing media:** Choose extinguishing media based on surrounding fire.
- **Unsuitable extinguishing media:** No data available.

5.2. Special hazards arising from the substance or mixture:

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- Clean contaminated surfaces thoroughly.
- Autoclave before disposal into appropriate containers. Follow appropriate cleaning procedures if spilled.
- Use absorbent material and disinfect. Wash contaminated clothing separately. Wash with soap and water. Additional personal protective equipment for cleaning may be mandatory.

6.4. Reference to other sections:

- For further and detailed information, see Sections 8 and 13.

Section 7: Handling and storage**7.1. Precautions for safe handling:**

- Observe conventional hygiene precautions.
- Handle and store according to instructions on the product information sheet.
- **Technical measures:** Follow established laboratory procedures when handling. Open only under a sterile workbench. Wear protective equipment. Handle as if containing infectious material.
- **Precautions against fire and explosion:** No special measures required.

7.2. Conditions for safe storage, including any incompatibilities:

- **Technical measures and storage conditions:** Handle and store according to instructions on the product information sheet. Keep cryovials at -150°C (freezer) or at -196°C (liquid nitrogen vapor phase).
- **Incompatible materials:** See Section 10.5
- **Packaging material:** No special prescriptions.

7.3. Specific end use(s):

PNEC values:**Compartment Value Note(s)**

Freshwater No data No notes
 Marine water No data No notes
 Freshwater

sediment | No data | No notes | | Marine water sediment | No data | No notes | | Sewage Treatment Plant (STP) | No data | No notes | | Intermittent release | No data | No notes | | Secondary poisoning | No data | No notes | | Soil | No data | No notes |

8.2. Exposure controls:

- **Appropriate engineering controls:** In pursuance of work, proper foresight is needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin.
- **Individual protection measures, such as personal protective equipment:** Avoid contact with skin, eyes, and clothing. Keep away from food and drinks. Wash hands immediately after handling the product.
 - **Eye/face protection:** Use appropriate protective glasses (EN 166).
 - **Skin protection:**
 - **Hand protection:** Use appropriate protective gloves (EN 374).
 - **Other:** Wear a lab coat while handling the product.
 - **Respiratory protection:** Normally, no respiratory protective equipment is required. Use a fume hood to keep airborne concentrations low. No exposure limits are known. European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.
 - **Thermal hazards:** No thermal hazards known

Parameter	Value / Test method / Remarks
Relative density	No data*
Solubility(ies)	No data*
Partition coefficient: n-octanol/water	No data*
Auto-ignition temperature	No data*
Decomposition temperature	No data*
Viscosity	No data*
Explosive properties	No data*
Oxidizing properties	No data*

9.2. Other information:

- **Chemical Properties:** Frozen cell cultures may contain DMSO. DMSO is stable and incompatible with a wide range of materials, including acid chlorides, strong acids, strong oxidizing agents, strong reducing agents, phosphorus halides, moisture, copper wool + trichloroacetic acid, and hygroscopic materials.

*: The manufacturer did not carry out any tests on this parameter for the product or the results of the tests are not available at the time of publication of the data sheet.

Section 10: Stability and reactivity

10.1. Reactivity:

- No reactivity known.

10.2. Chemical stability:

- Stable under normal conditions.

- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

11.1.1. Summaries of the information derived from the test conducted:

- No data available.

11.1.2. Relevant toxicological properties:

- **Toxicity data for DMSO:**

Route	LD50 (mg/kg)	Species
ORL-RAT	14500	Rat
ORL-MAM	21400	Mammal
IVN-MAN	686	Human
IPR-RAT		

- No toxic or exposure data available for cell lines; however, general protection procedures apply. Wear appropriate protection equipment.

Section 12: Ecological information

12.1. Toxicity:

- No data available.

12.2. Persistence and degradability:

- No data available.

12.3. Bioaccumulative potential:

- No data available.

12.4. Mobility in soil:

- No data available.

12.5. Results of PBT and vPvB assessment:

- No data available.

12.6. Other adverse effects:

- No data available.

14.2. UN proper shipping name:

- No proper shipping name.

14.3. Transport hazard class(es):

- No transport hazard classes.

14.4. Packing group:

- No packing group.

14.5. Environmental hazards:

- No relevant information available.

14.6. Special precautions for user:

- Additional information may be provided for the carriage of Dangerous Goods by road and air, regarding classification, packaging, and labeling, as cryovials (deep-frozen ampoules) must be shipped on dry ice or liquid nitrogen. The package will indicate all required information. Please contact the manufacturer in case of any questions regarding transport.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code:

- Not applicable.

Section 15: Regulatory information

- No information available.

Section 16: Other information

Information regarding the revision of the safety data sheet:

- No information available.

Literature references / data sources:

- Safety data sheet issued by the manufacturer (October 2020, English).

Methods used for the classification according to Regulation (EC) No 1272/2008:

- Not considered as a hazardous mixture.

Relevant hazard statements (code and full text) of Sections 2 and 3:

- H301 – Toxic if swallowed.
- H311 – Toxic in contact with skin.
- H319 – Causes serious eye irritation.
- H335 – May cause respiratory irritation.

Training advice:

- No data available.

Full text of the abbreviations in the safety

- **EWC:** European Waste Catalogue (replaced by LoW – see below).
- **GHS:** Globally Harmonized System of Classification and Labeling of Chemicals.
- **IATA:** International Air Transport Association.
- **ICAO-TI:** Technical Instructions for the Safe Transport of Dangerous Goods by Air.
- **IMDG:** International Maritime Dangerous Goods.
- **IMSBC:** International Maritime Solid Bulk Cargoes.
- **IUCLID:** International Uniform Chemical Information Database.
- **IUPAC:** International Union of Pure and Applied Chemistry.
- **Kow:** n-Octanol - Water Partition Coefficient.
- **LC50:** Lethal concentration resulting in 50% mortality.
- **LD50:** Lethal dose resulting in 50% mortality (median lethal dose).
- **LoW:** List of Waste.
- **LOEC:** Lowest Observed Effect Concentration.
- **LOEL:** Lowest Observed Effect Level.
- **NOEC:** No Observed Effect Concentration.
- **NOEL:** No Observed Effect Level.
- **NOAEC:** No Observed Adverse Effect Concentration.
- **NOAEL:** No Observed Adverse Effect Level.
- **OECD:** Organization for Economic Cooperation and Development.
- **OSHA:** Occupational Safety and Health Administration.
- **PBT:** Persistent, Bioaccumulative, and Toxic.
- **PNEC:** Predicted No Effect Concentration.
- **QSAR:** Quantitative Structure Activity Relationship.
- **REACH:** Regulation 1907/2006/EC concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals.
- **RID:** Regulations Concerning the International Transport of Dangerous Goods by Rail.</