

- 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:

- During a fire, irritating and toxic gases may be generated by thermal decomposition. The inhalation of such combustion products can have serious adverse effects on health.

5.3. Advice for firefighters:

- Wear full protective clothing and self-contained breathing apparatus.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment, and emergency procedures:

- **For non-emergency personnel:** Allow only well-trained experts wearing suitable protective clothing to remain in the field of accident.
- **For emergency responders:** Use personal protective equipment, including safety glasses, laboratory gloves, and appropriate laboratory clothing to prevent skin exposure. Do not open primary containers if not authorized.

6.2. Environmental precautions:

- Dispose of the spillage and resulting waste according to applicable environmental regulations. Do not allow the product or resulting waste to enter sewers, soil, surface, or groundwater. Notify respective authorities in case of environmental pollution immediately.

6.3. Methods and material for containment and cleaning up:

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.

8.2.3. Environmental exposure controls:

- No specific prescription. The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions, expert advice is necessary before deciding on further protective measures.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties:

| Parameter | Value / Test method / Remarks |
|--|--|
| Appearance | Frozen or liquid; no information available for cell cultures |
| Odour | No data* |
| Odour threshold | No data* |
| pH | No data* |
| Melting point/freezing point | No data* |
| Initial boiling point and boiling range | No data* |
| Flash point | No data* |
| Evaporation rate | No data* |
| Flammability (solid, gas) | No data* |
| Upper/lower flammability or explosive limits | No data* |
| Vapour pressure | No data* |
| Vapour density | No data* |

- **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 | 8200 | Rat |
| IVN-MUS | 3100 | Mouse |
| ORL-BWD | 100 | Bird |
| IVN-DOG | 2500 | Dog |

11.1.3. Information on likely routes of exposure:

- Ingestion, inhalation, skin contact, eye contact.

11.1.4. Symptoms related to the physical, chemical, and toxicological characteristics:

- No data available.

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

- No data available.

11.1.6. Interactive effects:

- No data available.

11.1.7. Absence of specific data:

- The toxicological properties have not been fully reported.

11.1.8. Other information:

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

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

- **Applicable Regulations:**

- REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive (EC) No 1999/45 and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive (EEC) No 76/769 and Commission Directives (EEC) No

91/155, (EEC) No 93/67, (EC) No 93/105 and (EC) No 2000/21.

- REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling, and packaging of substances and mixtures, amending and repealing Directives (EEC) No 67/548 and (EC) No 1999/45, and amending Regulation (EC) No 1907/2006.
- COMMISSION REGULATION (EU) No 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- All necessary licenses for import, holding, transfer, and export are in place from Cytion. The recipient must provide evidence of permits and licenses required by law for receiving and handling. Substances are for research use only.

15.2. Chemical safety assessment:

- **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.
- **SCBA:** Self Contained Breathing Apparatus.
- **SDS:** Safety Data Sheet.
- **STOT:** Specific Target Organ Toxicity.
- **SVHC:** Substances of Very High Concern.
- **UN:** United Nations.
- **UVCB:** Chemical Substances of Unknown or Variable Composition, Complex Reaction Products, and Biological Materials.
- **VOC:** Volatile Organic Compound.
- **vPvB:** very Persistent and very Bioaccumulative.

This safety data sheet has been prepared by MSDS-Europe (International branch of Toxinfo Kft.) on the basis of information provided by the manufacturer/supplier and conforms to the relevant regulations. For professional help regarding the explanation of the safety data sheet, please contact: +36 70 335 8480; info@msds-europe.com. The information, data, and recommendations contained herein are provided in good faith, obtained from reliable sources, and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information. The MSDS shall be used only as a guide for handling the product. While handling and using the product, other considerations may arise or be required. Users are cautioned to determine the appropriateness and applicability of the above information to their circumstances and purposes and assume all risks associated with the use of this product. It is the responsibility of the user to fully comply with local, national, and international regulations concerning the use of this product. Biological material may be hazardous and should be used with caution. Cytion GmbH shall not be held liable for any damage resulting from handling or from contact with the product.