# SAFETY DATA SHEET

**Singapore**

## Section 1. Identification

**GHS product identifier**

# Cell Boost™ 7b, without Poloxamer-188, without Insulin, without L-Glutamine

**Catalogue Number** SH31027.12

**Other means of identification** Not available.

**Product type** Solid.

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

**Identified uses**
For Further Manufacturing or Research Use. Not for Diagnostic or Therapeutic Use.

**Uses advised against** **Reason**

**Supplier**

HyClone Laboratories
925 West 1800 South
Logan, Utah 84321
Phone: (435) 792-8000

Cytiva Austria
Kremplstr. 5
4061 Pasching
AUSTRIA
Phone: +43 7229 64865

Cytiva Singapore
25 Tuas South Street 1
Singapore 638034

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25 Tuas South Street 1
Singapore 638034

**Emergency telephone number (with hours of operation)**

+65 6863 6704
(hours of operation: 8.30 pm - 5.30 pm)

## Section 2. Hazards identification

**Classification of the substance or mixture**

SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

**GHS label elements, including precautionary statements**

**Hazard pictograms**

**Signal word** Warning

**Hazard statements**

Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

**Precautionary statements**

| | |
|---|---|
| **Prevention** | Wear protective gloves. Wear eye or face protection. Avoid breathing dust. Wash thoroughly after handling. |
| **Response** | IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention. |
| **Storage** | Store in a well-ventilated place. Keep container tightly closed. |
| **Disposal** | Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| **Other hazards which do not result in classification** | None known. |

## Section 3. Composition/information on ingredients

| | |
|---|---|
| **Substance/mixture** | Mixture |
| **Other means of identification** | Not available. |
| **Chemical formula** | Not applicable. |

| **Ingredient name** | **%** | **Identifiers** |
|---|---|---|
| tyrosine | <48.25 | 60-18-4 |

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

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

## Section 4. First aid measures

**Description of necessary first aid measures**

| | |
|---|---|
| **Eye contact** | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. |
| **Inhalation** | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| **Skin contact** | 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. |
| **Ingestion** | 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. |

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

| | |
|---|---|
| **Eye contact** | Causes serious eye irritation. |
| **Inhalation** | May cause respiratory irritation. |
| **Skin contact** | Causes skin irritation. |
| **Ingestion** | No known significant effects or critical hazards. |

**Over-exposure signs/symptoms**

| | |
|---|---|
| **Eye contact** | Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness |
| **Inhalation** | Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing |
| **Skin contact** | Adverse symptoms may include the following:<br>irritation<br>redness |
| **Ingestion** | No specific data. |

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

| | |
|---|---|
| **Notes to physician** | In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| **Specific treatments** | No specific treatment. |
| **Protection of first-aiders** | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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

**Extinguishing media**

| | |
|---|---|
| **Suitable extinguishing media** | Use an extinguishing agent suitable for the surrounding fire. |
| **Unsuitable extinguishing media** | None known. |
| **Specific hazards arising from the chemical** | No specific fire or explosion hazard. |
| **Hazardous thermal decomposition products** | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide<br>nitrogen oxides<br>sulfur oxides |
| **Special protective actions for fire-fighters** | 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** | 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

**Personal precautions, protective equipment and emergency procedures**

| | |
|---|---|
| **For non-emergency personnel** | 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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| **For emergency responders** | 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". |
| **Environmental precautions** | 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). |

**Methods and materials for containment and cleaning up**

| | |
|---|---|
| **Small spill** | Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. |
| **Large spill** | Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. |

## Section 7. Handling and storage

**Precautions for safe handling**

| | |
|---|---|
| **Protective measures** | Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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** | 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. |
| **Conditions for safe storage, including any incompatibilities** | Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). 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. Store locked up. 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. |

## Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

None.

**Biological exposure indices**

No exposure indices known.

**Appropriate engineering controls** Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**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** 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**

**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. 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.

**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

**Appearance**

**Physical state** Solid.

**Color** White. to Off-white. to Light Orange.

**Odor** Not available.

**Odor threshold** Not available.

**pH** 6 to 8 [Conc. (% w/w): 1%]

**Melting point/freezing point** Not applicable.

**Boiling point or initial boiling point and boiling range** Not applicable.

**Flash point** [Product does not sustain combustion.]

**Burning time** Not available.

**Burning rate** Not available.

**Evaporation rate** Not available.

**Flammability** Not available.

**Lower and upper explosive (flammable) limits** Not applicable.

**Vapor pressure** Not available.

**Relative vapor density** Not applicable.

**Relative density** Not available.

**Solubility in water** Not available.

**Partition coefficient: n-octanol/water** Not applicable.

**Auto-ignition temperature** Not applicable.

**Decomposition temperature** Not available.

**SADT** Not available.

**Viscosity** Not applicable.

| | |
|---|---|
| **Flow time (ISO 2431)** | Not available. |
| **Particle characteristics** | |
| **Median particle size** | Not available. |

## Section 10. Stability and reactivity

| | |
|---|---|
| **Reactivity** | No specific test data related to reactivity available for this product or its ingredients. |
| **Chemical stability** | The product is stable. |
| **Possibility of hazardous reactions** | Under normal conditions of storage and use, hazardous reactions will not occur. |
| **Conditions to avoid** | No specific data. |
| **Incompatible materials** | No specific data. |
| **Hazardous decomposition products** | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| **SADT** | Not available. |

## Section 11. Toxicological information

**Information on toxicological effects**

**Acute toxicity**

| Product/ingredient name | Result |
|---|---|
| tyrosine | **Rat - Oral - LD50**<br>>5110 mg/kg |
| L-tryptophan | **Rat - Oral - LD50**<br>>16 g/kg<br>Toxic effects: Eye - Ptosis Behavioral - Coma Changes in Chemistry or Temperature - Body temperature decrease |

**Conclusion/Summary [Product]** Not available.

**Skin corrosion/irritation**

Not available.

**Conclusion/Summary [Product]** Not available.

| Ingredient name | Conclusion/Summary |
|---|---|
| tyrosine | Causes skin irritation. |
| L-tryptophan | May cause skin irritation. |

**Serious eye damage/eye irritation**

| Product/ingredient name | Result |
|---|---|
| L-tryptophan | **Rabbit - Eyes - Severe irritant**<br>Amount/concentration applied: 100 mg |

**Conclusion/Summary [Product]** Not available.

| Ingredient name | Conclusion/Summary |
|---|---|
| tyrosine | Causes serious eye irritation. |
| L-tryptophan | May cause eye irritation. |

**Respiratory corrosion/irritation**

Not available.

**Conclusion/Summary [Product]** Not available.

| Ingredient name | Conclusion/Summary |
|---|---|
| tyrosine | May cause respiratory irritation. |

**Respiratory or skin sensitization**

Not available.

**Skin**

**Conclusion/Summary [Product]** Not available.

**Respiratory**

**Conclusion/Summary [Product]** Not available.

**Germ cell mutagenicity**

Not available.

**Conclusion/Summary [Product]** Not available.

**Carcinogenicity**

Not available.

**Conclusion/Summary [Product]** Not available.

**Reproductive toxicity**

Not available.

**Conclusion/Summary [Product]** Not available.

**Specific target organ toxicity (single exposure)**

| Product/ingredient name | Result |
|---|---|
| tyrosine | - |

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure** Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

**Potential acute health effects**

**Eye contact** Causes serious eye irritation.

**Inhalation** May cause respiratory irritation.

**Skin contact** Causes skin irritation.

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

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

**Eye contact** Adverse symptoms may include the following:
pain or irritation
watering
redness

**Inhalation** Adverse symptoms may include the following:
respiratory tract irritation
coughing

**Skin contact** Adverse symptoms may include the following:
irritation
redness

**Ingestion** 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**

Not available.

**Conclusion/Summary [Product]** Not available.

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

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

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

**Reproductive toxicity** No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

N/A

## Section 12. Ecological information

**Toxicity**

Not available.

**Conclusion/Summary [Product]** Not available.

| Ingredient name | Conclusion/Summary |
|---|---|
| tyrosine | Naturally occurring substance |
| L-tryptophan | Naturally occurring substance |

**Persistence/degradability**

Not available.

**Conclusion/Summary [Product]** Not available.

| Ingredient name | Conclusion/Summary |
|---|---|
| tyrosine | Possibly hazardous, short-term degradation products are not likely. However, long-term degradation products may arise. |
| L-tryptophan | Not expected to bioaccumulate. Naturally occurring substance |

**Bioaccumulative potential**

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| tyrosine | -2.26 | - | Low |

**Mobility in soil**

**Soil/Water partition coefficient** Not available.

**Other adverse effects** No known significant effects or critical hazards.

## Section 13. Disposal considerations

**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. 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

| | UN | IMDG | IATA |
|---|---|---|---|
| **UN number** | Not available. | Not available. | Not available. |
| **UN proper shipping name** | Not available. | Not available. | Not available. |
| **Transport hazard class(es)** | Not available. | Not available. | Not available. |
| **Packing group** | - | - | - |
| **Environmental hazards** | No. | No. | No. |
| **Additional information** | - | - | - |

| | ADR/RID | ADN |
|---|---|---|
| **UN number** | Not available. | Not available. |
| **UN proper shipping name** | Not available. | Not available. |
| **Transport hazard class(es)** | Not available. | Not available. |
| **Packing group** | - | - |
| **Environmental hazards** | No. | No. |
| **Additional information** | | |

| | |
|---|---|
| **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

**Singapore - hazardous chemicals under government control**

None.

**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.

**International lists**

**National inventory**

| | |
|---|---|
| **United States** | All components are active or exempted. |
| **Canada inventory** | All components are listed or exempted. |
| **China** | All components are listed or exempted. |
| **Japan** | **Japan inventory (CSCL)**: All components are listed or exempted.<br>**Japan inventory (ISHL)**: Not determined. |

## Section 16. Other information

**History**

| | |
|---|---|
| **Date of printing** | 10 September 2025 |
| **Date of issue/Date of revision** | 10 September 2025 |
| **Date of previous issue** | No previous validation. |
| **Version** | 1 |
| | sds_author@cytiva.com |

**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

**Procedure used to derive the classification**

| Classification | Justification |
|---|---|
| SKIN CORROSION/IRRITATION - Category 2 | Calculation method |
| SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 | Calculation method |

**References** Not available.

**Indicates information that has changed from previously issued version.**

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.