SDS number:
Not available.

SAFETY DATA SHEET

Republic of Korea

In accordance with the Standard for Classification and Labeling of Chemical Substance and Safety Data Sheet, Article 10 Paragraph 1

Section 1. Chemical product and company identification

A. Product name HyCell TransFx-H™
Without L-Glutamine
Without Poloxamer 188

Catalogue Number SH30939.01

Article Number 29139857

B. Recommended use of the chemical

For Further Manufacturing or Research Use. Not for Diagnostic or Therapeutic Use.

Restrictions on use

Uses advised against

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

Supplier
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Kremplstr. 5
4061 Pasching
AUSTRIA
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1 Maritime Square #13-01
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(9.00 am - 6.00 pm)

Section 2. Hazards identification

A. Hazard classification Not classified.

This product was evaluated in accordance with the Industrial Safety and Health Act and the Chemical Control Act, and determined to be 'not classified'.

B. GHS label elements, including precautionary statements

Signal word No signal word.

Hazard statements No known significant effects or critical hazards.

Precautionary statements

Prevention Not applicable.

Response Not applicable.

Storage Not applicable.

Disposal Not applicable.

C. 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.

Ingredient name	Common name	Identifiers	%
Cobalt chloride (CoCl2), hexahydrate		CAS: 7791-13-1	≤5
Sulfuric acid, manganese(2+) salt, hydrate (1:1:1)		CAS: 10034-96-5	≤5
Cadmium chloride, hydrate (2:5)		CAS: 7790-78-5	≤5

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

A. Eye contact 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.

B. Skin contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

C. Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

D. Ingestion 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.

E. Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments No specific treatment.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

A. Extinguishing media

Suitable Use an extinguishing agent suitable for the surrounding fire.

Not suitable None known.

B. Specific hazards arising from the chemical In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products No specific data.

C. 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.

Special precautions 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.

Section 6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures 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.

B. 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).

C. Methods and materials for containment and cleaning up

Small spill Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

A. Precautions for safe handling

Protective 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.
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.
B. 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. 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

A. Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

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

C. Personal protective equipment

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.
Eye 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.
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.
Skin 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.
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.

Section 9. Physical and chemical properties

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

A. Appearance

Physical state	Liquid.
Color	Clear. Yellowish.
B. Odor	Not available.
C. Odor threshold	Not available.
D. pH	7 to 7.4
E. Melting/freezing point	Not available.
F. Boiling point or initial boiling point and boiling range	Not available.
G. Flash point	Not available.
Fire point	Not available.
Burning time	Not applicable.

	Burning rate	Not applicable.
H.	**Evaporation rate**	Not available.
I.	**Flammability (solid, gas)**	Not available.
J.	**Lower and upper explosive (flammable) limits**	Not available.
K.	**Vapor pressure**	Not available.

	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
Ingredient name	**mm Hg**	**kPa**	**Method**	**mm Hg**	**kPa**	**Method**
water	17.5	2.3				

L.	**Solubility in water**	Not available.
M.	**Vapor density**	Not available.
N.	**Relative density**	Not available.
O.	**Partition coefficient: n-octanol/water**	Not applicable.
P.	**Auto-ignition temperature**	Not available.
Q.	**Decomposition temperature**	Not available.
	SADT	Not available.
R.	**Viscosity**	Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available.
	Flow time (ISO 2431)	Not available.
S.	**Molecular weight**	Not applicable.

Particle characteristics

Median particle size	Not applicable.

Section 10. Stability and reactivity

A.	**Chemical stability**	The product is stable.
	Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
B.	**Conditions to avoid**	No specific data.
C.	**Incompatible materials**	No specific data.
D.	**Hazardous decomposition products**	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

A. Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Eyes.

Potential acute health effects

Respiratory	No known significant effects or critical hazards.
Oral	No known significant effects or critical hazards.
Skin	No known significant effects or critical hazards.
Eyes	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation	No specific data.
Ingestion	No specific data.
Skin contact	No specific data.
Eye contact	No specific data.

B. Health hazards

Acute toxicity

Not available.

Conclusion/Summary [Product]	Not available.

Skin corrosion/irritation

Not available.

Conclusion/Summary [Product] Not available.

Serious eye damage/eye irritation

Not available.

Conclusion/Summary [Product] Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] Not available.

Respiratory

Conclusion/Summary [Product] Not available.

Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP	ACGIH
Cobalt chloride (CoCl2), hexahydrate	+	3	Reasonably anticipated to be a human carcinogen.	A3
Sulfuric acid, manganese(2+) salt, hydrate (1:1:1)	-	-	-	A4
Cadmium chloride, hydrate (2:5)	-	1	-	A2

Reproductive toxicity

Not available.

Conclusion/Summary [Product] Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
Cadmium chloride, hydrate (2:5)	-

Aspiration hazard

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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Cobalt chloride (CoCl2), hexahydrate	766	N/A	N/A	N/A	N/A
Cadmium chloride, hydrate (2:5)	100	N/A	N/A	0.5	N/A

Section 12. Ecological information

A. Ecotoxicity

Not available.

Conclusion/Summary [Product]	Not available.

B. Persistence/degradability

Not available.

Conclusion/Summary [Product]	Not available.

C. Bioaccumulative potential

Not available.

D. Mobility in soil

Soil/Water partition coefficient	Not available.
E. Other adverse effects	No known significant effects or critical hazards.

Section 13. Disposal considerations

A. 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.
B. Disposal precautions	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 14. Transport information

UN

A.	**UN number**	Not available.
B.	**Proper shipping name**	Not available.
C.	**Classes**	Not available.
D.	**Packing group**	Not available.
E.	**Marine pollutant**	No.
F.	**Additional information**	-
	Label	

IMDG

A.	**UN number**	Not available.
B.	**Proper shipping name**	Not available.
C.	**Classes**	Not available.
D.	**Packing group**	Not available.
E.	**Marine pollutant**	No.
F.	**Additional information**	-
	Label	

IATA

A.	**UN number**	Not available.
B.	**Proper shipping name**	Not available.
C.	**Classes**	Not available.
D.	**Packing group**	Not available.
E.	**Marine pollutant**	No.
F.	**Additional information**	-
	Label	

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

A. Regulation according to ISHA

ISHA article 117 (Harmful substances prohibited from manufacture)	None of the components are listed.
ISHA article 118 (Harmful substances requiring permission)	None of the components are listed.

Exposure Limits of Chemical Substances and Physical Factors

None of the components have an OEL.

ISHA Enforcement Regs Annex 19 (Exposure standards established for harmful factors)	The following components are listed: cobalt and its inorganic compounds, manganese and its inorganic compounds, Cadmium and its compounds
ISHA Enforcement Regs Annex 21 (Harmful factors subject to Work Environment Measurement)	None of the components are listed.
ISHA Enforcement Regs Annex 22 (Harmful Factors Subject to Special Health Check-up)	None of the components are listed.

Standard of Industrial Safety and Health Annex 12 (Hazardous substances subject to control)	None of the components are listed.

B. Regulation according to Chemicals Control Act

Article 11 (TRI)	None of the components are listed.
Article 18 Prohibited (K-Reach Article 27)	None of the components are listed.
Article 19 Candidate substances subject to authorization (K-Reach Article 25)	None of the components are listed.
Article 19 Subject to authorization (K-Reach Article 25)	None of the components are listed.
Article 20 Toxic Chemicals (K-Reach Article 20)	Not applicable
Article 20 Restricted (K-Reach Article 27)	None of the components are listed.

Article 39 (Accident Precaution Chemicals)

Not listed.

MoE 2021-51 - Regulations on the quantity of toxic substances, restricted substances, prohibited substances and permitted substances

Ingredient name	Higher regulated quantity	Lower regulated quantity
inorganic zinc, salts	400 tonnes	20 tonnes
acetic acid	400 tonnes	20 tonnes
2-Methyl-1,4-naphthalenedione	400 tonnes	20 tonnes
selenium compounds	200 tonnes	5 tonnes
Ergocalciferol	400 tonnes	20 tonnes
cadmium compounds	400 tonnes	20 tonnes
inorganic tin, salts	-	20 tonnes

Existing Chemical Substances Subject to Registration	The following components are listed: Sulfuric acid, zinc salt (1:1), heptahydrate, Cadmium chloride, hydrate (2:5), Tin chloride (SnCl2), dihydrate
C. Dangerous Materials Safety Management Act	Not applicable.
D. Wastes regulation	Dispose of contents and container in accordance with all local, regional, national and international regulations.

E. Regulation according to other foreign laws

Article 2 of Youth Protection Act on Substances Hazardous to Youth	Not applicable.

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

Republic of Korea	Not determined.
United States	Not determined.
China	At least one component is not listed.
Japan	**Japan inventory (CSCL)**: Not determined. **Japan inventory (ISHL)**: Not determined.

Section 16. Other information

A. References

B.	**First issue date**	16 September 2025
C.	**Date of issue/Date of revision**	16 September 2025 / 16 September 2025
D.	**Version**	1
	Date of printing	**16 September 2025**
		sds_author@cytiva.com

E. Other

Indicates information that has changed from previously issued version.

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

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