



SAFETY DATA SHEET

New Zealand

Section 1. Identification

Product name

ActiCHO™ SM, with Poloxamer-188, without Insulin, without L-Glutamine, 50L

Catalogue Number

SH31029.03



9 0 S H 3 1 0 2 9 . 0 3

Other means of identification Not available.

Product type Solid.

Identified uses

For further manufacturing.

Supplier

Cytiva Austria
Kremlstr. 5
4061 Pasching
AUSTRIA
Tel. (+43) 7229 64865
Fax (+43) 7229 64866

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

Cytiva Singapore
1 Maritime Square #13-01
Harbourfront Centre
Singapore 099253

Person who prepared the SDS :

sds_author@cytiva.com

Cytiva New Zealand
Buddle Findlay, Level 18, Pricewaterhousecooper Tower,
188 Quay Street,
Auckland, Auckland, 1010
New Zealand

Emergency telephone number

111

Section 2. Hazards identification

HSNO Classification

EYE IRRITATION - Category 2
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 44.5%

This material is classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS label elements

Signal word Warning

Hazard statements Causes serious eye irritation.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General Do not apply directly into or onto water. Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Prevention Wear eye or face protection. Avoid release to the environment. Wash thoroughly after handling.

Response 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	Not applicable.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Symbol	

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	% (w/w)	Identifiers
Sodium chloride	<25.35	CAS: 7647-14-5 EC: 231-598-3
Poloxalene >50% in a non hazardous diluent	<8.2	CAS: 9003-11-6
Butanedioic acid	<5.35	CAS: 110-15-6 EC: 203-740-4
Potassium chloride	<3.3	CAS: 7447-40-7 EC: 231-211-8
Sodium phosphate	<3.3	CAS: 7558-80-7 EC: 231-449-2
L-serine	<2.8	CAS: 56-45-1 EC: 200-274-3
L-valine	<1.95	CAS: 72-18-4 EC: 200-773-6

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

Inhalation	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. 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.
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.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	Causes serious eye irritation.

Over-exposure signs/symptoms

Inhalation	No specific data.
Ingestion	No specific data.
Skin	No specific data.
Eyes	Adverse symptoms may include the following: pain or irritation watering redness

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

Specific treatments	Not available.
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.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)**Section 5. Firefighting measures****Extinguishing media**

Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	None known.
Specific hazards arising from the chemical	This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides halogenated compounds metal oxide/oxides
Hazchem code	Not available.
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.
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 spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	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".
Environmental precautions	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.

Methods and material 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 the 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.

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. 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	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. 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.
---	--

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

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.

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 and safety characteristics

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

Appearance

Physical state	Solid.
Colour	Off-white. Light brown. Light Orange.
Odour	Not available.
Odour threshold	Not available.
pH	3 to 4 [Conc. (% w/w): 2.1%]
Melting point/freezing point	Not available.
Boiling point or initial boiling point and boiling range	Not available.
Flash point	Not applicable.
Burning time	Not available.
Burning rate	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Lower and upper explosive (flammable) limits	Not applicable.
Vapour pressure	Not available.
Relative vapour 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	Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available.
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.

Section 11. Toxicological information**Information on likely routes of exposure**

Inhalation	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	No specific data.
Ingestion	No specific data.
Skin contact	No specific data.
Eye contact	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**Acute toxicity**

Product/ingredient name	Result
Poloxalene >50% in a non hazardous diluent	Rabbit - Dermal - LD50 20000 mg/kg Rat - Oral - LD50 5700 mg/kg Toxic effects: Behavioral - Somnolence (general depressed activity) Gastrointestinal - Hypermotility, diarrhea
Butanedioic acid	Rat - Oral - LD50 2260 mg/kg
Potassium chloride	Rat - Male - Oral - LD50 2600 mg/kg Toxic effects: Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Nausea or vomiting
Sodium phosphate	Rat - Oral - LD50 8290 mg/kg
L-serine	Rat - Oral - LD50 14 g/kg
L-valine	Rat - Oral - LD50 2000 mg/kg

Conclusion/Summary[Product] Not available.**Skin corrosion/irritation**

Not available.

Conclusion/Summary[Product] Not available.

Ingredient name

L-serine
L-valine

Conclusion/Summary

May cause skin irritation.
May cause skin irritation.

Serious eye damage/eye irritation

Not available.

Conclusion/Summary[Product] Not available.

Ingredient name

L-serine
L-valine

Conclusion/Summary

May cause eye irritation.
May cause eye irritation.

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.

Potential chronic health effects

General	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	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.

Chronic toxicity

Not available.

Conclusion/Summary[Product] Not available.

Carcinogenicity

Not available.

Conclusion/Summary[Product] Not available.

Germ cell mutagenicity

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

Sodium phosphate

Result

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE
(Respiratory tract irritation) - Category 3

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
HyClone™ ActiCHO™ SM	86223.7	N/A	N/A	N/A	N/A
Poloxalene >50% in a non hazardous diluent	5700	20000	N/A	N/A	N/A
Butanedioic acid	2260	N/A	N/A	N/A	N/A
Potassium chloride	2600	N/A	N/A	N/A	N/A
Sodium phosphate	8290	N/A	N/A	N/A	N/A
L-serine	14000	N/A	N/A	N/A	N/A
L-valine	2000	N/A	N/A	N/A	N/A

Section 12. Ecological information

Ecotoxicity

This material is harmful to aquatic life with long lasting effects.

Aquatic and terrestrial toxicity

Product/ingredient name

Sodium chloride

Result

Acute - LC50 - Fresh water

Fish - Striped bass - *Morone saxatilis* - Larvae
1000 mg/l [96 hours]

Effect: Mortality

Chronic - NOEC - Fresh water

Daphnia - Water flea - *Daphnia pulex*
0.314 g/l [21 days]

Effect: Reproduction

Chronic - NOEC - Fresh water

Fish - Eastern mosquitofish - *Gambusia holbrooki* - Adult
100 mg/l [8 weeks]

Effect: Reproduction

Chronic - NOEC - Fresh water

OECD
Aquatic plants - Duckweed - *Lemna minor*
6 g/l [96 hours]

Effect: Growth

Acute - EC50 - Fresh water

Daphnia - Water flea - *Daphnia magna*
402.6 mg/l [48 hours]

Effect: Intoxication

Acute - EC50 - Fresh water

Algae - Green algae - *Selenastrum capricornutum*
28.85 mg/dm³ [72 hours]

Effect: Population

LC50

OECD 203 [Fish, Acute Toxicity Test]
Fish

10000 mg/l [96 hours]

Acute - EC50 - Fresh water

Daphnia - Water flea - *Daphnia magna* - Larvae

Age: <24 hours

374.2 mg/l [48 hours]

Effect: Intoxication

Acute - LC50 - Fresh water

Crustaceans - Water flea - *Pseudosida ramosa* - Neonate
Age: ≤24 hours

9.68 mg/l [48 hours]

Effect: Mortality

Poloxalene >50% in a non hazardous diluent

Butanedioic acid

Potassium chloride

	Acute - EC50 - Fresh water ISO Algae - Green algae - <i>Desmodesmus subspicatus</i> 9.24 g/l [72 hours] <u>Effect:</u> Population
Sodium phosphate	Acute - LC50 - Fresh water Fish - Zebra danio - <i>Danio rerio</i> 509.65 mg/l [96 hours] <u>Effect:</u> Mortality
L-serine	Acute - LC50 - Fresh water Fish - Western mosquitofish - <i>Gambusia affinis</i> - Adult 720 ppm [96 hours] <u>Effect:</u> Mortality
L-valine	Acute - EC50 Daphnia 83 mg/l [48 hours]
	Acute - NOEC Algae 1000 mg/l [72 hours]
	LC50 Fish 10000 mg/l [96 hours]

Conclusion/Summary[Product] Not available.**Ingredient name**L-serine
L-valine**Conclusion/Summary**Naturally occurring substance
Naturally occurring substance**Persistence/degradability****Product/ingredient name**

L-valine

Result

82% [28 days]

Conclusion/Summary[Product] Not available.**Ingredient name**Poloxalene >50% in a non hazardous diluent
L-serine
L-valine**Conclusion/Summary**Not expected to bioaccumulate.
Not expected to bioaccumulate. Naturally occurring substance
Not expected to bioaccumulate. Naturally occurring substance**Product/ingredient name**

L-valine

Aquatic half-life

-

Photolysis

-

Biodegradability

Readily

Bioaccumulative potential**Product/ingredient name**succinic acid
L-serine
L-valine**LogP_{ow}**-0.59
-3.07
-2.26**BCF**-
0.609
0.846**Potential**Low
Low
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 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. 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*
New Zealand Class	Not regulated.	-	-	-
IATA Class	Not regulated.	-	-	-
IMDG Class	Not regulated.	-	-	No.

PG* : Packing group

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

HSNO Approval Number	Not available.
HSNO Group Standard	Not available.
HSNO Classification	EYE IRRITATION - Category 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

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

New Zealand	Not determined.
Australia	Not determined.
United States	Not determined.
Canada inventory	Not determined.
China	Not determined.
Japan	Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined.

Section 16. Other information

History

Date of printing	25 October 2025
Date of issue/ Date of revision	26 October 2025
Date of previous issue	8/1/2025
Version	1.02

Key to abbreviations	ADG = Australian Dangerous Goods ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road 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) RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail UN = United Nations
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.
