

# SAFETY DATA SHEET



In accordance with 1907/2006 Annex II (2015/830) and 1272/2008

(All references to EU regulations and directives are abbreviated into only the numeric term)

Issued 2018-04-20

Version number 1.0.G

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Trade name GlycOCATCH™  
Article number G1-OC6-001, G3-OC6-002

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

identified uses  
Company Genovis AB  
Box 790  
22007 LUND  
Sweden  
Telephone +46 (0)46 10 12 30  
E-mail info@genovis.com

### 1.4. Emergency telephone number

Acute cases: Call 112, request poison information.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Flammable liquids (Category 3), H226

### 2.2. Label elements

Hazard pictogram



Signal word Warning  
Hazard statement H226 Flammable liquid and vapour  
Precautionary statement P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

### 2.3. Other hazards

Not indicated.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Note that the table shows known hazards of the ingredients in pure form. These hazards are reduced or eliminated when mixed or diluted, see Section 16d.

Constituent	Classification	Concentration
<b>AGAROSE</b>		
CAS No: 9012-36-6 EC No: 232-731-8		<100 %
<b>ETHYL ALCOHOL</b>		
CAS No: 64-17-5 EC No: 200-578-6 Index No: 603-002-00-5	Flam Liq 2; H225	1 - 10 %

<b>GlycOCATCH™ protein</b>	
	1 - 10 %

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complements used in the calculation of the classification of this mixture, see Section 16b.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Generally

In case of concern, or if symptoms occur, call a doctor/physician.

#### Upon breathing in

Fresh air and rest. If symptoms persist seek medical advice.

#### Upon eye contact

As a precaution, rinse the eye thoroughly with water; If symptoms occur, call a doctor/physician.

#### Upon skin contact

Normal washing of the skin is considered sufficient; If nevertheless symptoms do occur, contact a physician.

#### Upon ingestion

Rinse nose, mouth and throat with water.

If symptoms persist contact a doctor.

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

No further relevant information available.

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

Symptomatic treatment.

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

Extinguish with water mist, powder, carbon dioxide or alcoholresistant foam.

### 5.2. Special hazards arising from the substance or mixture

Flammable liquid.

Produces fumes containing harmful gases (carbon monoxide and carbon dioxide) when burning.

### 5.3. Advice for fire-fighters

In case of fire use a respirator mask.

## SECTION 6: Accidental release measures

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

Avoid inhalation and exposure to skin and eyes.

Use recommended safety equipment, see section 8.

### 6.2. Environmental precautions

Avoid discharge into sewers.

### 6.3. Methods and material for containment and cleaning up

Absorb the liquid with an inert absorbent, vermiculite, for example. Collect the material for disposal at a waste disposal facility.

### 6.4. Reference to other sections

Contaminated products should be treated as chemical waste and declared as non-hazardous goods.

For waste disposal see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Do not inhale dust and avoid contact with skin and eyes.

The usual precautions for handling chemicals should be observed.

Handle in premises with good ventilation.

### 7.2. Conditions for safe storage, including any incompatibilities

Store only in the original package.

Store at 4 - 8 °C.

Do not store in direct sunlight.

Store in a dry and segregated area.

### 7.3. Specific end uses

Not relevant.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1. National limit values

##### ETHYL ALCOHOL

#### United Kingdoms (EH40/2005)

Time-weighted-average exposure limit (TWA) 1000 ppm / 1920 mg/m<sup>3</sup>

#### DNEL

No data available.

#### PNEC

No data available.

### 8.2. Exposure controls

In terms of minimizing risks, attention must be paid to the physical hazards (see Sections 2 and 10) of this product according to EU directives 89/391 and 98/24 and national occupational legislation.

#### 8.2.1. Appropriate engineering controls

Emergency showers and eye-rinsing facilities must be available at the workplace.

#### Eye/face protection

Eye protection should be worn if there is any danger of direct exposure or splashing.

#### Skin protection

It is generally not necessary to use protective gloves.

#### Respiratory protection

Respiratory protection is not required.

#### 8.2.3. Environmental exposure controls

For limitation of environmental exposure, see Section 12.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

a) Appearance	Form: suspension and liquid. Colour: Solution : Colourless. / Suspension : White.
b) Odour	Sweetish. Alcohol-like. [Slight]
c) Odour threshold	Not indicated
d) pH	Not indicated
e) Melting point/freezing point	Not indicated
f) Initial boiling point and boiling range	80 °C
g) Flash point	50 °C
h) Evaporation rate	Not indicated
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	Not indicated
k) Vapour pressure	Not indicated
l) Vapour density	Not indicated
m) Relative density	Not indicated
n) Solubility	Not indicated
o) Partition coefficient: n-octanol/water	Not applicable
p) Auto-ignition temperature	Not indicated
q) Decomposition temperature	Not indicated
r) Viscosity	Not indicated
s) Explosive properties	Not applicable
t) Oxidising properties	Not applicable

### 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product contains no substances which can lead to hazardous reactions at normal use.

### 10.2. Chemical stability

The product is stable at normal storage and handling conditions.

### 10.3. Possibility of hazardous reactions

No hazardous reactions known during normal use.

**10.4. Conditions to avoid**

Avoid heat, sparks and open flames.  
Protect from moisture.

**10.5. Incompatible materials**

Avoid contact with oxidizers.

**10.6. Hazardous decomposition products**

None under normal conditions.

## SECTION 11: Toxicological information

**11.1. Information on toxicological effects**

The product is not classified as toxic.

**Acute toxicity**

Not classified as an acutely toxic substance.  
The product is not classified as harmful to health.

**ETHYL ALCOHOL**

LD50 rabbit 24h: > 20000 mg/kg Dermal  
LC50 rat 4h: 124.7 mg/L Inhalation  
LD50 rat 24h: 6200 mg/kg Orally

**Skin corrosion/irritation**

May cause skin irritation.

**Serious eye damage/irritation**

Eye contact may cause burning pain or irritation.

**Respiratory or skin sensitisation**

Not indicated.

**Germ cell mutagenicity**

Not indicated.

**Carcinogenicity**

To the best of our knowledge, no carcinogenic effects have been reported for this product.

**Reproductive toxicity**

To the best of our knowledge, no mutagenic or otherwise genetic or reproductive toxic effects have been reported for this product.

**STOT-single exposure**

To the best of our knowledge this product does not affect discernment if used in the manner intended.

**STOT-repeated exposure**

To the best of our knowledge, no chronic effects have been reported for this product.

**Aspiration hazard**

Not indicated.

## SECTION 12: Ecological information

**12.1. Toxicity**

Not indicated.

**ETHYL ALCOHOL**

LC50 Rainbow trout (*Oncorhynchus mykiss*) 96h: 13480 mg/L  
LC50 fathead minnow (*Pimephales promelas*) 96h: 13480 mg/L  
LC50 Freshwater water flea (*Daphnia magna*) 48h: 5400 mg/L  
EC50 Freshwater water flea (*Daphnia magna*) 24h: 10800 mg/l  
IC50 Algae 72h: 0.02 mg/l

**12.2. Persistence and degradability**

No information about persistence or degradability exists but there is no reason to suppose that the product is persistent.

**12.3. Bioaccumulative potential**

No information exists on bioaccumulation, but there is no cause for concern in respect of this.

**12.4. Mobility in soil**

No information about mobility in the nature exists but there is no reason to suppose the product to be ecologically harmful because of this.

**12.5. Results of PBT and vPvB assessment**

No chemical safety report has been executed.

**12.6. Other adverse effects**

Not indicated.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Waste handling of the product

The product is not classified as hazardous waste.

This product is not usually recycled.

Combustion is a suitable method for final disposal of this waste product.

See also national waste regulations.

Also take local regulations for dealing with waste into account.

## SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

### 14.1. UN number

Not classified as dangerous goods

### 14.2. UN proper shipping name

Not applicable

### 14.3. Transport hazard class(es)

Not applicable

### 14.4. Packing group

Not applicable

### 14.5. Environmental hazards

Not applicable

### 14.6. Special precautions for user

Not applicable

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

### 14.8 Other transport information

Not applicable

## SECTION 15: Regulatory information

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

Not indicated.

### 15.2. Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

## SECTION 16: Other information

### 16a. Indication of where changes have been made to the previous version of the safety data sheet

#### Revisions of this document

Earlier versions

2017-01-25 Changes in section(s) 1.

### 16b. Legend to abbreviations and acronyms used in the safety data sheet

#### Full texts for Hazard Class and Category Code mentioned in section 3

Flam Liq 2 Flammable liquids (Category 2)

#### Explanations of the abbreviations in Section 14

ADR European Agreement concerning the International Transport of Dangerous Goods by Road

RID Regulations concerning the International Transport of Dangerous Goods by Rail

IMDG International Maritime Dangerous Goods Code

ICAO International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)

IATA The International Air Transport Association

### 16c. Key literature references and sources for data

#### Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I, as updated to 2017-03-01.

Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

#### Full texts for Regulations mentioned in this Safety Data Sheet

1907/2006 Annex II (2015/830)	COMMISSION REGULATION (EU) 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)
1272/2008	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
EH40/2005	EH40/2005 Workplace exposure limits
89/391	COUNCIL DIRECTIVE (89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work
98/24	COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)
1907/2006	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 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

**16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification**

Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I, where all available information which may be significant to establishing the hazards of the mixture was assessed together, and in accordance with 1907/2006 Annex XI.

**16e. List of relevant hazard statements and/or precautionary statements**

**Full texts for hazard statements mentioned in section 3**

H225 Highly flammable liquid and vapour

**16f. Advice on any training appropriate for workers to ensure protection of human health and the environment**

**Warning for misuse**

Not indicated.

**Other relevant information**

**Editorial information**

This safety data sheet has been generated by Genovis AB, Scheelevägen 2, SE-22363 Lund, Sweden.

[www.genovis.com](http://www.genovis.com)

# SAFETY DATA SHEET

In accordance with 1907/2006 Annex II (2015/830) and 1272/2008  
(All references to EU regulations and directives are abbreviated into only the numeric  
term)

Issued 2018-04-20

Version number 1.1.G



## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Trade name SialEXO™  
Article number G1-SM1-020, G1-SM1-002, Part of G3-OC6-002, G2-OP1-020 and G2-OG1-020

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Protein deglycosylation reagent

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

Company Genovis AB  
Box 790  
22007 LUND  
Sweden  
Telephone +46 (0)46 10 12 30  
E-mail info@genovis.com

### 1.4. Emergency telephone number

Acute cases: Call 112, request poison information.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Skin Irritant (Category 2), H315  
Irritates eyes (Category 2), H319  
Specific target organ toxicity - single exposure; May cause respiratory irritation (Category 3 resp), H335

### 2.2. Label elements

Hazard pictogram



Signal word Warning  
Hazard statements  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
Precautionary statements  
P261 Avoid breathing dust  
P280 Wear protective gloves and eye protection  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337+P313 If eye irritation persists: Get medical advice/attention

### 2.3. Other hazards

Not indicated.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Note that the table shows known hazards of the ingredients in pure form. These hazards are reduced or eliminated when mixed or diluted, see Section 16d.

Constituent	Classification	Concentration
SODIUM CHLORIDE		

CAS No: 7647-14-5 EC No: 231-598-3		>50 %
<b>TRIS HYDROCHLORIDE</b>		
CAS No: 1185-53-1 EC No: 214-684-5	Skin Irrit 2, Eye Irrit 2, STOT SE <i>3resp</i> ; H315, H319, H335	<40 %
<b>TRIS BASE</b>		
CAS No: 77-86-1 EC No: 201-064-4		<20 %
<b>POTASSIUM CHLORIDE</b>		
CAS No: 7447-40-7 EC No: 231-211-8		<1 %
<b>SialEXO™</b>		
		1 - 20 %

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complements used in the calculation of the classification of this mixture, see Section 16b.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Generally

In case of concern, or if symptoms occur, call a doctor/physician.

#### Upon breathing in

Allow the injured person to rest in a warm place with fresh air, if symptoms persist seek medical attention.

#### Upon eye contact

Rinse the eye for several minutes with lukewarm water. If irritation persists call a doctor/ophthalmologist.

#### Upon skin contact

Normal washing of the skin is considered sufficient; If nevertheless symptoms do occur, contact a physician.

#### Upon ingestion

Rinse nose, mouth and throat with water.

Contact a doctor.

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

#### Upon breathing in

Inhalation of dust may cause coughing and irritation.

#### Upon eye contact

Eye irritation may occur.

#### Upon skin contact

Skin irritation may occur.

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

Symptomatic treatment.

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

Extinguish with water mist, powder, carbon dioxide or alcoholresistant foam.

### 5.2. Special hazards arising from the substance or mixture

The product is not hazardous in the flammable sense.

In case of fire corrosive and poisonous gases may form, e.g. sodium oxide, carbon oxides and hydrogen chloride.

### 5.3. Advice for fire-fighters

In case of fire use a respirator mask.

## SECTION 6: Accidental release measures

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

Avoid dust formation.

Do not inhale dust and avoid contact with skin, eyes and clothes when cleaning up spill.

### 6.2. Environmental precautions

Avoid discharge into sewers.

### 6.3. Methods and material for containment and cleaning up

Sweep carefully and collect.

Avoid stirring the material up so that it aerates.



#### 6.4. Reference to other sections

Contaminated products should be treated as chemical waste and declared as non-hazardous goods.  
See section 8 and 13 for personal protection equipment and disposal considerations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Do not inhale dust and avoid contact with skin and eyes.  
Avoid handling in a manner which will raise dust.  
Handle in premises with good ventilation.  
The usual precautions for handling chemicals should be observed.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in a well-ventilated space.  
Store only in the original package.  
Store cool, in sealed package.

### 7.3. Specific end uses

Not relevant.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1. National limit values

All ingredients (cf. Section 3) lack occupational exposure limit values.

#### DNEL

No data available.

#### PNEC

No data available.

### 8.2. Exposure controls

In terms of minimizing risks, no special attention is needed for this product besides the general obligations that follow EU directive 89/391 and national occupational legislation.

#### Eye/face protection

Use protective glasses, safety goggles, or a visor.

#### Skin protection

Normal working-clothes of cotton or synthetic material should be adequate. Clothing contaminated with this product should be washed immediately; avoid contact with the skin.  
Wear protective gloves if risk of skin contact.

#### Respiratory protection

A particle filter P1 could be required during strongly dust generating work.

#### 8.2.3. Environmental exposure controls

For limitation of environmental exposure, see Section 12.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

a) Appearance	Form: lyophilised powder. Colour: white.
b) Odour	Not indicated
c) Odour threshold	Not indicated
d) pH	Not indicated
e) Melting point/freezing point	Not indicated
f) Initial boiling point and boiling range	Not indicated
g) Flash point	Not indicated
h) Evaporation rate	Not indicated
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	Not indicated
k) Vapour pressure	Not indicated
l) Vapour density	Not indicated
m) Relative density	Not indicated
n) Solubility	Not indicated
o) Partition coefficient: n-octanol/water	Not applicable
p) Auto-ignition temperature	Not indicated
q) Decomposition temperature	Not indicated
r) Viscosity	Not indicated
s) Explosive properties	Not applicable

t) Oxidising properties

Not applicable

## 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Not indicated.

### 10.2. Chemical stability

The product is stable at normal storage and handling conditions.

### 10.3. Possibility of hazardous reactions

Not indicated.

### 10.4. Conditions to avoid

Do not expose to high temperatures.

### 10.5. Incompatible materials

Not indicated.

### 10.6. Hazardous decomposition products

Not indicated.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

No available data.

#### Acute toxicity

Not indicated.

#### SODIUM CHLORIDE

LD50 rabbit 24h: > 10000 mg/kg Dermal

LD50 rat 24h: 3000 mg/kg Orally

#### TRIS HYDROCHLORIDE

LD50 rabbit 24h: 5900 mg/kg Orally

#### TRIS BASE

LD50 rat 24h: 5900 mg/kg Orally

#### POTASSIUM CHLORIDE

LD50 rat 24h: 2600 mg/kg Orally

#### Skin corrosion/irritation

May cause skin irritation.

#### Serious eye damage/irritation

Eye contact may cause burning pain or irritation.

#### Respiratory or skin sensitisation

Not indicated.

#### Germ cell mutagenicity

Not indicated.

#### Carcinogenicity

Not indicated.

#### Reproductive toxicity

Not indicated.

#### STOT-single exposure

May cause irritation to the respiratory tract.

#### STOT-repeated exposure

Not indicated.

#### Aspiration hazard

Not indicated.

## SECTION 12: Ecological information

### 12.1. Toxicity

Not indicated.

#### SODIUM CHLORIDE

EC50 Freshwater water flea (Daphnia magna) 48 h: 1000 mg/l

LC50 Fish 96h: 17.9 mg/l

#### TRIS HYDROCHLORIDE

LC50 Freshwater water flea (Daphnia magna) 48h: > 100

### 12.2. Persistence and degradability

No information about persistence or degradability exists but there is no reason to suppose that the product is persistent.

### 12.3. Bioaccumulative potential

No information exists on bioaccumulation, but there is no cause for concern in respect of this.

### 12.4. Mobility in soil

No information about mobility in the nature exists but there is no reason to suppose the product to be ecologically harmful because of this.

### 12.5. Results of PBT and vPvB assessment

No chemical safety report has been executed.

### 12.6. Other adverse effects

Not indicated.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Waste handling of the product

Discarded products must be disposed of as hazardous waste in accordance with regulations.

Observe local regulations or contact the supplier for further information.

See also national waste regulations.

## SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

### 14.1. UN number

Not classified as dangerous goods

### 14.2. UN proper shipping name

Not applicable

### 14.3. Transport hazard class(es)

Not applicable

### 14.4. Packing group

Not applicable

### 14.5. Environmental hazards

Not applicable

### 14.6. Special precautions for user

Not applicable

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

### 14.8 Other transport information

Not applicable

## SECTION 15: Regulatory information

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

Not indicated.

### 15.2. Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

## SECTION 16: Other information

### 16a. Indication of where changes have been made to the previous version of the safety data sheet

#### Revisions of this document

This is the first version

### 16b. Legend to abbreviations and acronyms used in the safety data sheet

#### Full texts for Hazard Class and Category Code mentioned in section 3

Skin Irrit 2                      Skin Irritant (Category 2)

Eye Irrit 2                      Irritates eyes (Category 2)

STOT SE 3<sub>resp</sub>                      Specific target organ toxicity - single exposure; May cause respiratory irritation (Category 3 resp)

#### Explanations of the abbreviations in Section 14

ADR    European Agreement concerning the International Transport of Dangerous Goods by Road

RID    Regulations concerning the International Transport of Dangerous Goods by Rail

IMDG    International Maritime Dangerous Goods Code

ICAO    International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)

IATA    The International Air Transport Association

## 16c. Key literature references and sources for data

### Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I , as updated to 2017-06-08.

Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

### Full texts for Regulations mentioned in this Safety Data Sheet

1907/2006 Annex II (2015/830) COMMISSION REGULATION (EU) 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)

1272/2008 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

89/391 COUNCIL DIRECTIVE (89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work

1907/2006 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 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

## 16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I , where all available information which may be significant to establishing the hazards of the mixture was assessed together, and in accordance with 1907/2006 Annex XI .

## 16e. List of relevant hazard statements and/or precautionary statements

### Full texts for hazard statements mentioned in section 3

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

## 16f. Advice on any training appropriate for workers to ensure protection of human health and the environment

### Warning for misuse

Not indicated.

### Other relevant information

### Editorial information

This safety data sheet has been generated by Genovis AB, Scheelevägen 2, SE-22363 Lund, Sweden.

[www.genovis.com](http://www.genovis.com)

# SAFETY DATA SHEET

In accordance with 1907/2006 Annex II (2015/830) and 1272/2008 (All references to EU regulations and directives are abbreviated into only the numeric term)

Issued 2018-04-20

Version number 1.1.G



## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Trade name OpeRATOR™  
Article number G1-OP1-020, G2-OP1-020, G1-OP1-002, Part of G3-OC6-002

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Protein fragmentation reagent

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

Company Genovis AB  
Box 790  
22007 LUND  
Sweden  
Telephone +46 (0)46 10 12 30  
E-mail info@genovis.com

### 1.4. Emergency telephone number

Acute cases: Call 112, request poison information.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Skin Irritant (Category 2), H315  
Irritates eyes (Category 2), H319  
Specific target organ toxicity - single exposure; May cause respiratory irritation (Category 3 resp), H335

### 2.2. Label elements

Hazard pictogram



Signal word Warning  
Hazard statements  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
Precautionary statements  
P261 Avoid breathing dust  
P280 Wear protective gloves and eye protection  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337+P313 If eye irritation persists: Get medical advice/attention

### 2.3. Other hazards

Not indicated.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Note that the table shows known hazards of the ingredients in pure form. These hazards are reduced or eliminated when mixed or diluted, see Section 16d.

Constituent	Classification	Concentration
SODIUM CHLORIDE		

CAS No: 7647-14-5 EC No: 231-598-3		>50 %
<b>TRIS HYDROCHLORIDE</b>		
CAS No: 1185-53-1 EC No: 214-684-5	Skin Irrit 2, Eye Irrit 2, STOT SE <i>3resp</i> ; H315, H319, H335	<40 %
<b>TRIS BASE</b>		
CAS No: 77-86-1 EC No: 201-064-4		<20 %
<b>POTASSIUM CHLORIDE</b>		
CAS No: 7447-40-7 EC No: 231-211-8		<1 %
<b>OpeRATOR™</b>		
		1 - 20 %

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complements used in the calculation of the classification of this mixture, see Section 16b.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Generally

In case of concern, or if symptoms occur, call a doctor/physician.

#### Upon breathing in

Allow the injured person to rest in a warm place with fresh air, if symptoms persist seek medical attention.

#### Upon eye contact

Rinse the eye for several minutes with lukewarm water. If irritation persists call a doctor/ophthalmologist.

#### Upon skin contact

Normal washing of the skin is considered sufficient; If nevertheless symptoms do occur, contact a physician.

#### Upon ingestion

Rinse nose, mouth and throat with water.

Contact a doctor.

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

#### Upon breathing in

Inhalation of dust may cause coughing and irritation.

#### Upon eye contact

Eye irritation may occur.

#### Upon skin contact

Skin irritation may occur.

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

Symptomatic treatment.

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

Extinguish with water mist, powder, carbon dioxide or alcoholresistant foam.

### 5.2. Special hazards arising from the substance or mixture

The product is not hazardous in the flammable sense.

In case of fire corrosive and poisonous gases may form, e.g. sodium oxide, carbon oxides and hydrogen chloride.

### 5.3. Advice for fire-fighters

In case of fire use a respirator mask.

## SECTION 6: Accidental release measures

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

Avoid dust formation.

Do not inhale dust and avoid contact with skin, eyes and clothes when cleaning up spill.

### 6.2. Environmental precautions

Avoid discharge into sewers.

### 6.3. Methods and material for containment and cleaning up

Sweep carefully and collect.

Avoid stirring the material up so that it aerates.

#### 6.4. Reference to other sections

Contaminated products should be treated as chemical waste and declared as non-hazardous goods.  
See section 8 and 13 for personal protection equipment and disposal considerations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Do not inhale dust and avoid contact with skin and eyes.  
Avoid handling in a manner which will raise dust.  
Handle in premises with good ventilation.  
The usual precautions for handling chemicals should be observed.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in a well-ventilated space.  
Store only in the original package.  
Store cool, in sealed package.

### 7.3. Specific end uses

Not relevant.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1. National limit values

All ingredients (cf. Section 3) lack occupational exposure limit values.

#### DNEL

No data available.

#### PNEC

No data available.

### 8.2. Exposure controls

In terms of minimizing risks, no special attention is needed for this product besides the general obligations that follow EU directive 89/391 and national occupational legislation.

#### Eye/face protection

Use protective glasses, safety goggles, or a visor.

#### Skin protection

Normal working-clothes of cotton or synthetic material should be adequate. Clothing contaminated with this product should be washed immediately; avoid contact with the skin.  
Wear protective gloves if risk of skin contact.

#### Respiratory protection

A particle filter P1 could be required during strongly dust generating work.

#### 8.2.3. Environmental exposure controls

For limitation of environmental exposure, see Section 12.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

a) Appearance	Form: lyophilised powder. Colour: white.
b) Odour	Not indicated
c) Odour threshold	Not indicated
d) pH	Not indicated
e) Melting point/freezing point	Not indicated
f) Initial boiling point and boiling range	Not indicated
g) Flash point	Not indicated
h) Evaporation rate	Not indicated
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	Not indicated
k) Vapour pressure	Not indicated
l) Vapour density	Not indicated
m) Relative density	Not indicated
n) Solubility	Not indicated
o) Partition coefficient: n-octanol/water	Not applicable
p) Auto-ignition temperature	Not indicated
q) Decomposition temperature	Not indicated
r) Viscosity	Not indicated
s) Explosive properties	Not applicable

t) Oxidising properties

Not applicable

## 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Not indicated.

### 10.2. Chemical stability

The product is stable at normal storage and handling conditions.

### 10.3. Possibility of hazardous reactions

Not indicated.

### 10.4. Conditions to avoid

Do not expose to high temperatures.

### 10.5. Incompatible materials

Not indicated.

### 10.6. Hazardous decomposition products

Not indicated.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

No available data.

#### Acute toxicity

Not indicated.

#### SODIUM CHLORIDE

LD50 rabbit 24h: > 10000 mg/kg Dermal

LD50 rat 24h: 3000 mg/kg Orally

#### TRIS HYDROCHLORIDE

LD50 rabbit 24h: 5900 mg/kg Orally

#### TRIS BASE

LD50 rat 24h: 5900 mg/kg Orally

#### POTASSIUM CHLORIDE

LD50 rat 24h: 2600 mg/kg Orally

#### Skin corrosion/irritation

May cause skin irritation.

#### Serious eye damage/irritation

Eye contact may cause burning pain or irritation.

#### Respiratory or skin sensitisation

Not indicated.

#### Germ cell mutagenicity

Not indicated.

#### Carcinogenicity

Not indicated.

#### Reproductive toxicity

Not indicated.

#### STOT-single exposure

May cause irritation to the respiratory tract.

#### STOT-repeated exposure

Not indicated.

#### Aspiration hazard

Not indicated.

## SECTION 12: Ecological information

### 12.1. Toxicity

Not indicated.

#### SODIUM CHLORIDE

EC50 Freshwater water flea (Daphnia magna) 48 h: 1000 mg/l

LC50 Fish 96h: 17.9 mg/l

#### TRIS HYDROCHLORIDE

LC50 Freshwater water flea (Daphnia magna) 48h: > 100

### 12.2. Persistence and degradability

No information about persistence or degradability exists but there is no reason to suppose that the product is persistent.



### 12.3. Bioaccumulative potential

No information exists on bioaccumulation, but there is no cause for concern in respect of this.

### 12.4. Mobility in soil

No information about mobility in the nature exists but there is no reason to suppose the product to be ecologically harmful because of this.

### 12.5. Results of PBT and vPvB assessment

No chemical safety report has been executed.

### 12.6. Other adverse effects

Not indicated.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Waste handling of the product

Discarded products must be disposed of as hazardous waste in accordance with regulations.

Observe local regulations or contact the supplier for further information.

See also national waste regulations.

## SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

### 14.1. UN number

Not classified as dangerous goods

### 14.2. UN proper shipping name

Not applicable

### 14.3. Transport hazard class(es)

Not applicable

### 14.4. Packing group

Not applicable

### 14.5. Environmental hazards

Not applicable

### 14.6. Special precautions for user

Not applicable

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

### 14.8 Other transport information

Not applicable

## SECTION 15: Regulatory information

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

Not indicated.

### 15.2. Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

## SECTION 16: Other information

### 16a. Indication of where changes have been made to the previous version of the safety data sheet

#### Revisions of this document

This is the first version

### 16b. Legend to abbreviations and acronyms used in the safety data sheet

#### Full texts for Hazard Class and Category Code mentioned in section 3

Skin Irrit 2                      Skin Irritant (Category 2)

Eye Irrit 2                      Irritates eyes (Category 2)

STOT SE 3<sub>resp</sub>                      Specific target organ toxicity - single exposure; May cause respiratory irritation (Category 3 resp)

#### Explanations of the abbreviations in Section 14

ADR    European Agreement concerning the International Transport of Dangerous Goods by Road

RID    Regulations concerning the International Transport of Dangerous Goods by Rail

IMDG    International Maritime Dangerous Goods Code

ICAO    International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)

IATA    The International Air Transport Association

## 16c. Key literature references and sources for data

### Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I , as updated to 2017-06-08.

Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

### Full texts for Regulations mentioned in this Safety Data Sheet

1907/2006 Annex II (2015/830) COMMISSION REGULATION (EU) 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)

1272/2008 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

89/391 COUNCIL DIRECTIVE (89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work

1907/2006 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 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

## 16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I , where all available information which may be significant to establishing the hazards of the mixture was assessed together, and in accordance with 1907/2006 Annex XI .

## 16e. List of relevant hazard statements and/or precautionary statements

### Full texts for hazard statements mentioned in section 3

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

## 16f. Advice on any training appropriate for workers to ensure protection of human health and the environment

### Warning for misuse

Not indicated.

### Other relevant information

### Editorial information

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