

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 2019-12-13

Version number 1.0

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

1.1. Product identifier

Trade name	GingisKHAN® Fab kit
Article number	B0-GFK-020, B0-GKH-020, B0-CYS-020, CS-CH1-005

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

Identified uses	Antibody fragmentation and purification
-----------------	---

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.

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)

Revision date 2019-12-12

Replaces issued SDS 2015-03-09

Version number 3.0



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

1.1. Product identifier

Trade name	GingisKHAN®
Article number	B0-GKH-020

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

Identified uses	Antibody fragmentation reagent For Research use only
-----------------	---

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

Upon assessment, this mixture is not classified as hazardous according to 1272/2008

2.2. Label elements

Hazard pictogram	Not applicable
Signal word	Not applicable
Hazard statement	Not applicable

Supplemental hazard information

EUH210 Safety data sheet available on request.

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
TRIS (HYDROXYMETHYL)-AMINOMETHANE		
CAS No: 77-86-1 EC No: 201-064-4		>80 %
GingisKHAN		
	Skin Irrit 2; H315	≥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

No special measures are considered to be necessary. If symptoms do occur however, 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

If dust has come in contact with eyes, do not rub.

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

Upon skin contact

Wash the skin with soap and water.

Remove contaminated clothes.

If symptoms occur, contact a physician.

Upon ingestion

Rinse nose, mouth and throat with water.

Immediately drink a few glasses of water or milk.

Upon ingestion of larger amounts, consult a doctor/physician.

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

Upon breathing in

Inhalation of dust may cause sneezing and burning pain in nose and throat.

Upon eye contact

Irritation may occur due to mechanical abrasion.

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

In case of fire, substances hazardous to health, or substances harmful in other respects, may be dispersed.

5.3. Advice for fire-fighters

Protective measures should be taken regarding other material at the site of the fire.

In case of fire use a respirator mask.

Wear full protective clothing.

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.

Avoid dust formation.

Ensure good ventilation.

6.2. Environmental precautions

Avoid discharge into soil, water or sewers.

Contact rescue service in case of release of larger quantities.

6.3. Methods and material for containment and cleaning up

Sweep carefully and collect.

Rinse area thoroughly with water.

6.4. Reference to other sections

See section 8 and 13 for personal protection equipment and disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Store this product separately from food items and keep it out of the reach of children and pets.

Avoid handling in a manner which will raise dust.

Avoid spillage, inhalation and contact with eyes and skin.

Do not eat, drink or smoke in premises where this product is handled.

Handle in premises which have modern ventilation standards.

Read and follow the manufacturer's instructions.

Wash your hands after using the product.

Wash contaminated clothing before reuse.

Use local extract ventilation or similar ventilation, as dust may be formed.

7.2. Conditions for safe storage, including any incompatibilities

This product should be stored well out of reach of young children and kept safely apart from products intended for consumption.

Always use sealed and visibly labeled packages.

Store tightly, in original packaging.

Store in a cool and dry place (above freezing temperature and not greater than 30°C).

Store in a well-ventilated space.

7.3. Specific end uses

See identified uses in Section 1.2.

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.

8.2.1. Appropriate engineering controls

Handle in premises which have modern ventilation standards.

Use local extract ventilation or similar ventilation, as dust may be formed.

Eye/face protection

Use dust protective glasses when handling may create dust.

Skin protection

Protective gloves are normally not needed due to the properties of this product, but may be necessary for other reasons, e.g. mechanical risks, temperature conditions or microbiological risks.

Wear suitable protective clothing when necessary.

Respiratory protection

Use appropriate breathing apparatus during sanding and/or other dust forming handling.

Particle filter P2/P3 is recommended.

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.
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

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

At normal handling and use, hazardous reactions will not occur.

10.4. Conditions to avoid

None in particular.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on possible health hazards are based on experience and / or toxicological properties of several components in the product.

Acute toxicity

The product is not classified as acutely toxic.

TRIS (HYDROXYMETHYL)-AMINOMETHANE

LD50 rat 24h: 5900 mg/kg Orally

Skin corrosion/irritation

The product is neither corrosive nor irritant.

Serious eye damage/irritation

The product is not classified as irritant to the eyes.

Respiratory or skin sensitisation

The product is not classified as sensitising.

Germ cell mutagenicity

The product is not classified as mutagen.

Carcinogenicity

The product is not classified as carcinogenic.

Reproductive toxicity

The product is not classified as a reproductive toxicant .

STOT-single exposure

No known hazards for occasional exposure.

STOT-repeated exposure

No known hazards for repeated exposure.

Aspiration hazard

The product is not classified as being toxic for aspiration.

SECTION 12: Ecological information

12.1. Toxicity

The product is not to be labelled as a environmental hazard. However, it is not inconceivable that large emissions, or repeated small emissions, can have a harmful effect on the environment.

12.2. Persistence and degradability

There is no information regarding persistence or degradability.

12.3. Bioaccumulative potential

There is no information regarding bioaccumulation.

12.4. Mobility in soil

Information about mobility in nature is not available.

12.5. Results of PBT and vPvB assessment

No chemical safety report has been prepared.

12.6. Other adverse effects

No known effects or hazards.

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 normally recycled. Empty packaging should be disposed of at a recycling centre where practically possible. The manufacturer is affiliated to REPA.

Observe local regulations.

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

Earlier versions

2015-03-09 Changes in section(s) 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13.

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)

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 2019-12-12.

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 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
- 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

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

Not indicated

Editorial information



This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Platensgatan 8, SE-582 20 Linköping, Sweden, www.kemrisk.se

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)

Revision date 2019-12-12

Replaces issued SDS 2015-03-09

Version number 3.0



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

1.1. Product identifier

Trade name	GingisKHAN Reducing Agent
Article number	B0-CYS-020

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

Identified uses	Antibody fragmentation reagent For Research use only
-----------------	---

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

2.2. Label elements

Hazard pictogram



Signal word

Warning

Hazard statements

H315

Causes skin irritation

H319

Causes serious eye irritation

Precautionary statements

P280

Wear protective gloves and eye protection

P332+P313

If skin irritation occurs: Get medical advice/attention

P337+P313

If eye irritation persists: Get medical advice/attention

2.3. Other hazards

This product does not contain any substances that are assessed to be a PBT or a vPvB

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
TRIS (HYDROXYMETHYL)-AMINOMETHANE		
CAS No: 77-86-1 EC No: 201-064-4		>80 %
L-Cysteine hydrochloride monohydrate		
CAS No: 7048-04-6 EC No: 200-157-7	Skin Irrit 2, Eye Irrit 2, STOT SE <i>3resp</i> ; H315, H319, H335	<15 %

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 persist, call a doctor/physician.

Upon breathing in

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

Upon eye contact

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

Upon skin contact

Remove contaminated clothes.

Wash the skin with soap and water.

If symptoms occur, contact a physician.

Upon ingestion

Rinse mouth out thoroughly first with water, then SPIT OUT the rinse water. Drink at least half a litre of water and seek medical advice. DO NOT INDUCE VOMITING.

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

Upon eye contact

Irritation.

Smarting pain.

Upon skin contact

Irritation.

Upon ingestion

May cause irritation of mucous membranes, nausea and vomiting.

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 materials intended for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Produces fumes containing harmful gases (carbon monoxide and carbon dioxide) when burning, and, in case of incomplete combustion, aldehydes and other toxic, harmful, irritant or environmentally harmful substances.

5.3. Advice for fire-fighters

Protective measures should be taken regarding other material at the site of the fire.

In case of fire use a respirator mask.

Wear full protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use recommended safety equipment, see section 8.

Avoid inhalation and exposure to skin and eyes.

Ensure good ventilation.

6.2. Environmental precautions

Avoid release to drains, soil or watercourses.

6.3. Methods and material for containment and cleaning up

Collect spill material and send for disposal.

6.4. Reference to other sections

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 the product and avoid exposure to skin, eyes and clothing.

Store this product separately from food items and keep it out of the reach of children and pets.

Do not eat, drink or smoke in premises where this product is handled.

Wash your hands after using the product.

Remove contaminated clothing.

Wash contaminated clothing before reuse.

The usual precautions for handling chemicals should be observed.

7.2. Conditions for safe storage, including any incompatibilities

The product should be stored in a manner which prevents hazards to health and the environment. Avoid exposure to humans and animals and do not discharge the product in a sensitive environment.

This product should be stored well out of reach of young children and kept safely apart from products intended for consumption.

Always use sealed and visibly labeled packages.

7.3. Specific end uses

See identified uses in Section 1.2.

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

Wash hands thoroughly after handling and before food intake or smoking.

Eye/face protection

Use protective glasses with tight seals according to standard EN166.

Skin protection

Use protective gloves fulfilling the standard EN374 if there is a risk of direct contact.

Respiratory protection

Use proper protective breathing equipment in case of insufficient ventilation.

8.2.3. Environmental exposure controls

Work with the product should take place in such a way that the product does not get into soils and waterways.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance	Form: lyophilised powder.
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

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.

10.4. Conditions to avoid

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

Information on possible health hazards are based on experience and / or toxicological properties of several components in the product.

Acute toxicity

The product is not classified as acutely toxic.

TRIS (HYDROXYMETHYL)-AMINOMETHANE

LD50 rat 24h: 5900 mg/kg Orally

Skin corrosion/irritation

Irritant to skin.

Serious eye damage/irritation

Irritating to eyes.

Respiratory or skin sensitisation

The product is not classified as sensitising.

Germ cell mutagenicity

The product is not classified as mutagen.

Carcinogenicity

The product is not classified as carcinogenic.

Reproductive toxicity

The product is not classified as a reproductive toxicant .

STOT-single exposure

No known hazards for occasional exposure.

STOT-repeated exposure

No known hazards for repeated exposure.

Aspiration hazard

The product is not classified as being toxic for aspiration.

SECTION 12: Ecological information

12.1. Toxicity

The product is not to be labelled as a environmental hazard. However, it is not inconceivable that large emissions, or repeated small emissions, can have a harmful effect on the environment.

Prevent release on land, in water and drains.

12.2. Persistence and degradability

There is no information regarding persistence or degradability.

12.3. Bioaccumulative potential

There is no information regarding bioaccumulation.

12.4. Mobility in soil

Information about mobility in nature is not available.

12.5. Results of PBT and vPvB assessment

This product does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Other adverse effects

No known effects or hazards.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste handling of the product

- The product is not classified as hazardous waste.
- Empty, rinsed packaging is sent for recycling where practicable.
- Observe local regulations.
- Avoid discharge into sewers.
- 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

Earlier versions

2015-03-09 Changes in section(s) 2, 4, 5, 6, 7, 8, 10, 11, 12, 13.

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 3resp	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 2019-12-12.

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 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
- 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
- 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

This product can cause harm if used improperly. The manufacturer, the distributor or the supplier are not responsible for adverse effects if the product is not handled in accordance with the directions for use.

Other relevant information

Not indicated

Editorial information



This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Platensgatan 8, SE-582 20 Linköping, Sweden, www.kemrisk.se

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 2019-12-12

Version number 1.0



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

1.1. Product identifier

Trade name	CaptureSelect™ IgG-CH1
Article number	CS-CH1-005

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

Identified uses	Antibody purification
	For Research use only

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

Flammable liquids (Category 3), H226

2.2. Label elements

Hazard pictogram



Signal word	Warning
Hazard statement	
H226	Flammable liquid and vapour
Precautionary statements	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233	Keep container tightly closed
P403+P235	Store in a well-ventilated place. Keep cool

2.3. Other hazards

This product does not contain any substances that are assessed to be a PBT or a vPvB

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
AGAROSE		
CAS No: 9012-36-6 EC No: 232-731-8		<100 %
ETHANOL		
CAS No: 64-17-5 EC No: 200-578-6 Index No: 603-002-00-5 REACH: 01-2119457610-43	Flam Liq 2; H225	1 - 10 %
CaptureSelect® Affinity Ligand		
		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

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

Upon skin contact

Wash the skin with soap and water.

Upon ingestion

Rinse nose, mouth and throat with water.

Get medical attention if you feel unwell.

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

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

Recommended extinguishing agents

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

Unsuitable extinguishing agents

May not be extinguished with water dispersed under high pressure.

5.2. Special hazards arising from the substance or mixture

Emits flammable vapours which may form an explosive mixture with air.

Produces fumes containing harmful gases (carbon monoxide and carbon dioxide) when burning, and, in case of incomplete combustion, aldehydes and other toxic, harmful, irritant or environmentally harmful substances.

5.3. Advice for fire-fighters

Protective measures should be taken regarding other material at the site of the fire.

In case of fire use a respirator mask.

Wear full protective clothing.
Cool closed containers that were exposed to fire with water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Note the risk of ignition.
Switch off equipment which has an exposed flame, glows, or has a heat source of some other kind.
Switch off power at the main switch. Do not use the power switch in the room where the spillage has occurred.
Note, risk for formation of sparks due to static electricity. Do not remove clothing in a room where spillage has occurred.
Evacuate the accident area and call an ambulance, if relevant.
Keep unauthorized and unprotected people at a safe distance.
Do not inhale vapours and avoid contact with skin, eyes and clothes when cleaning up the spillage.
Ensure good ventilation.
Use recommended safety equipment, see section 8.
Use masks with fresh air when oxygen content is low or unknown.

6.2. Environmental precautions

Avoid release to drains, soil or watercourses.
Prevent from entering sewers, basements and pits, or any place where gas accumulation could be dangerous.
Notify rescue services for larger spillage.

6.3. Methods and material for containment and cleaning up

Do NOT use tools emitting sparks when cleaning.
Absorb the liquid with an inert absorbent, vermiculite, for example. Collect the material for disposal at a waste disposal facility.
Residues left behind after cleaning shall be treated as hazardous waste. For further information, contact the local authority sanitisation works. Present this safety data sheet.
Ensure good ventilation after sanitation.

6.4. Reference to other sections

See also section 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Open fire, hot items, sparks or other ignition sources must not be present in the environment used for handling this product.
The product may be electrostatically charged. Always ground the containers while transferring the contents from one container to another. Do not use tools that may cause sparks.
Do not inhale the fumes and avoid exposure to skin, eyes and clothing.
Do not eat, drink or smoke in premises where this product is handled.
Store this product separately from food items and keep it out of the reach of children and pets.
Wash your hands after using the product.
Remove contaminated clothing.
Wash contaminated clothing before reuse.
Use recommended safety equipment, see section 8.

7.2. Conditions for safe storage, including any incompatibilities

This product should be stored well out of reach of young children and kept safely apart from products intended for consumption.
Keep out of reach for children.
Store separately from food and animal fodder, incl. utensils or surfaces which have been in contact with these things.
Always use sealed and visibly labeled packages.
Store tightly, in original packaging.
Store as flammable liquid.
Store in dry and cool area.
Store in a well-ventilated space.
Do not store close to incompatible materials (see section 10.5).

7.3. Specific end uses

See identified uses in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National limit values

ETHANOL

United Kingdom (EH40/2005)

Time-weighted-average exposure limit (TWA) 1000 ppm / 1920 mg/m³

DNEL

ETHANOL

	Type of exposure	Route of exposure	Value
Worker	Acute	Inhalation	1900 mg/m ³
	Local		
Consumer	Chronic Systemic	Inhalation	114 mg/m ³
Worker	Chronic Systemic	Dermal	343 mg/kg bw/d
Worker	Chronic Systemic	Inhalation	950 mg/m ³
Consumer	Acute Local	Inhalation	950 mg/m ³
Consumer	Acute Local	Dermal	950 mg/m ³
Consumer	Chronic Systemic	Oral	87 mg/kg
Consumer	Chronic Systemic	Dermal	206 mg/kg bw/d

PNEC

ETHANOL

Environmental protection target	PNEC value
Fresh water	0.96 mg/l
Freshwater sediments	3.6 mg/kg
Marine water	0.79 mg/l
Marine sediments	2.9 mg/kg
Microorganisms in sewage treatment	580 mg/l
Soil (agricultural)	0.63 mg/kg

8.2. Exposure controls

To prevent occupational risks the health hazards for this product or any of the ingredients should be taken into account (see sections 2, 3 and 11), according to EU Directive 89/391 and 98/24 and national jurisdiction for occupational risks.

8.2.1. Appropriate engineering controls

Handle in premises with good ventilation.

Use local exhaust ventilation.

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

Protective gloves are normally not needed due to the properties of this product, but may be necessary for other reasons, e.g. mechanical risks, temperature conditions or microbiological risks.

Respiratory protection

Use proper protective breathing equipment in case of insufficient ventilation.

8.2.3. Environmental exposure controls

Work with the product should take place in such a way that the product does not get into drains, waterways, soil and air.

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	like alcohol
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

Vapour can create explosive mixtures with air.

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

May emit volatile, flammable vapours. Avoid handling close to heat or ignition sources.

10.4. Conditions to avoid

Avoid heat, sparks and open flames.
Protect from heat and direct sunlight.
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

Information on possible health hazards are based on experience and / or toxicological properties of several components in the product.

Acute toxicity

The product is not classified as acutely toxic.

ETHANOL

LD50 rabbit 24h: > 20000 mg/kg Dermally

LC50 rat 4h: 124.7 mg/L Inhalation

LD50 rat 24h: 6200 mg/kg Orally

Skin corrosion/irritation

The product is neither corrosive nor irritant.

Serious eye damage/irritation

The product is not classified as irritant to the eyes.

Respiratory or skin sensitisation

The product is not classified as sensitising.

Germ cell mutagenicity

The product is not classified as mutagen.

Carcinogenicity

The product is not classified as carcinogenic.

Reproductive toxicity

The product is not classified as a reproductive toxicant .

STOT-single exposure

No known hazards for occasional exposure.

STOT-repeated exposure

No known hazards for repeated exposure.

Aspiration hazard

The product is not classified as being toxic for aspiration.

SECTION 12: Ecological information

12.1. Toxicity

Prevent release on land, in water and drains.

The product, according to current criteria and based on available information, is considered not to be harmful to the environment.

ETHANOL

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*) 48 h: 9268 mg/L

LC50 Ide (*Leuciscus idus*) 48h: 8140 mg/L

EC50 Freshwater water flea (*Daphnia magna*) 24h: 10800 mg/l

IC50 Algae 72h: > 10.9 mg/L

LC50 Common Bleak (*Alburnus alburnus*) 96h: 11000 mg/L

LC50 Rainbow trout (*Oncorhynchus mykiss*) 24h: 11200 mg/L

IC50 Pseudomonas (*Pseudomonas putida*) 16h: 6500 mg/L

12.2. Persistence and degradability

There is no information regarding persistence or degradability.

12.3. Bioaccumulative potential

There is no information regarding bioaccumulation.

12.4. Mobility in soil

Information about mobility in nature is not available.

12.5. Results of PBT and vPvB assessment

This product does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Other adverse effects

Data lacking.

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.

Not completely emptied packaging can contain remnants of dangerous substances and should therefore be handled as hazardous waste according to the above. Completely emptied packaging can be recycled.

Avoid discharge into sewers.

Observe local regulations.

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

1170

14.2. UN proper shipping name

ETHYL ALCOHOL SOLUTION

14.3. Transport hazard class(es)

Class

3: Flammable liquids

Classification code (ADR/RID)

F1: Flammable liquids having a flash-point of or below 60 °C

Subsidiary risk (IMDG)

No subsidiary risk according to IMDG

Labels



14.4. Packing group

Packing group III

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Tunnel restrictions

Tunnel category: D/E

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

Not applicable

14.8 Other transport information

Transport category: 3; Maximum total quantity per transport unit: 1000 kgs or litres

Stowage category A (IMDG)

Emergency Schedule (EmS) for FIRE (IMDG) F-E

Emergency Schedule (EmS) for SPILLAGE (IMDG) S-D

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

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

Tunnel restriction code: D/E; Transport by bulk or via tank: Passage forbidden through tunnels of category D and E, Other transportation means: Passage forbidden through tunnels of category E

Transport category: 3; Maximum total quantity per transport unit: 1000 kgs or litres

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 2019-12-12.

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 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
- 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
- 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**

This product can cause harm if used improperly. The manufacturer, the distributor or the supplier are not responsible for adverse effects if the product is not handled in accordance with its intended use.

Other relevant information

Not indicated

Editorial information



This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Platensgatan 8, SE-582 20 Linköping, Sweden, www.kemrisk.se