SAFETY DATA SHEET

FabALACTICA™ Immobilized

SECTION 1: Identification

1.1. Product identifier

Trade name

FabALACTICA™ Immobilized

Product no.

A0-AG6-010, A0-AG6-050, A0-AG6-100, A0-AG6-1000, A2-AFK-005, A2-AFK-025, A2-AFK-100, A2-AFK-1000

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

Relevant identified uses of the substance or mixture

Antibody fragmentation reagent, Laboratory use
Restricted to professional and industrial use.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Genovis AB
Box 4
244 21 Kävlinge
Sweden
+46 (0)46 10 12 30
www.genovis.com

E-mail

info@genovis.com

SDS date

4/13/2026

SDS Version

1.0

1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (triage.webpoisoncontrol.org) to get specific guidance for your case
See also section 4 “First aid measures”.

SECTION 2: Hazard(s) identification

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.1. Classification of the substance or mixture

Flam. Liq. 3; H226, Flammable liquid and vapour.

2.2. Label elements

Hazard pictogram(s)

Signal word

Warning

Hazard statement(s)

Flammable liquid and vapour. (H226)

Precautionary statement(s)

General

Not applicable.

Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)

Response

In case of fire: Use water mist/carbon dioxide/alcohol-resistant foam to extinguish. (P370+P378)

Storage

Store in a well-ventilated place. Keep cool. (P403+P235)

Disposal

Dispose of contents/container in accordance with local regulation.
(P501)

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
ethanol;ethyl alcohol	CAS No.: 64-17-5	1-20%	Flam. Liq. 2, H225	
FabALACTICA™	CAS No.:	1-10%		

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

-

SECTION 4: First-aid measures

4.1. Description of first aid measures

General information

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).
Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.
In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do

not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

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

None known.

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

Treat symptomatically.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Flammable liquid and vapour.
In use may form flammable/explosive vapour-air mixture.
Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.
If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Carbon oxides (CO / CO2)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.
Ensure adequate ventilation, especially in confined areas.
Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.
Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 “Disposal considerations” on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ground and bond container and receiving equipment.
Use explosion-proof electrical/lighting/ventilating equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Avoid contact during pregnancy and while nursing.

Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Take action to prevent static discharges.
Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Recommended storage material

Keep only in original packaging.

Liquid class

Flammable liquid / Class IC (NFPA 30)

Storage conditions

Dry, cool and well ventilated

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanol;ethyl alcohol
Short term exposure limit (STEL) (ACGIH TLV) (ppm): 1000
Long term exposure limit (OSHA Table Z-1) (mg/m^3): 1900
Long term exposure limit (OSHA Table Z-1) (ppm): 1000

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.
Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure

No specific requirements.

Individual protection measures, such as personal protective equipment

Generally

Use only protective equipment with a recognized certification mark, e.g. the UL mark.

Respiratory Equipment

Type	Class	Colour	Standards
Respiratory protection is not needed in the event of adequate ventilation.			

Skin protection

No specific requirements.

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Gloves	-	-	EN374

Eye protection

Type	Standards
Safety glasses	EN166

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Color

No data available.

Odor

No data available.

Odor threshold (ppm)

No data available.

pH

No data available

Density (g/cm^3)

No data available

Relative density

No data available

Kinematic viscosity

No data available

Particle characteristics

No data available

Phase changes

Melting point/freezing point (°F)

-

Melting point/freezing point (°C)

-9

Softening point/range (°F)

Does not apply to liquids.

Boiling point (°F)

No data available

Vapor pressure

No data available

Relative vapor density

No data available

Decomposition temperature (°F)

No data available

Data on fire and explosion hazards

Flash point (°F)

-

Flash point (°C)

36

Flammability (°F)

The material is ignitable.

Auto-ignition temperature (°F)

No data available

Explosion limits (% v/v)

No data available

Solubility

Solubility in water

Soluble

n-octanol/water coefficient (LogKow)

No data available

Solubility in fat (g/L)

No data available

9.2. Other information

Evaporation rate (n-butylacetate = 100)

No data available

Other physical and chemical parameters

No data available.

Oxidizing properties

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 “Handling and storage”.

10.3. Possibility of hazardous reactions, including those associated with foreseeable emergencies

None known.

10.4. Conditions to avoid

Mechanical influences (e.g. Shock, pressure, impact, friction). Fire, sparks or other ignition sources.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Product/substance	ethanol;ethyl alcohol
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50 (24h)
Result:	>20000 mg/kg

Product/substance	ethanol;ethyl alcohol
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50 (4 hours)
Result:	124.7 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Rat
Route of exposure:	Oral
Test:	LD50 (24h)
Result:	6200 mg/kg

Based on available data, the classification criteria are not met.

Skin corrosion/irritation
Based on available data, the classification criteria are not met.

Serious eye damage/irritation
Based on available data, the classification criteria are not met.

Respiratory sensitisation
Based on available data, the classification criteria are not met.

Skin sensitisation
Based on available data, the classification criteria are not met.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Carcinogenicity
Based on available data, the classification criteria are not met.

Reproductive toxicity
Based on available data, the classification criteria are not met.

STOT-single exposure
Based on available data, the classification criteria are not met.

STOT-repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.

Long term effects
None known.

Other information
None known.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	ethanol;ethyl alcohol
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	13480 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	13480 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Daphnia
Duration:	48 hours

Test:	LC50
Result:	5400 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Daphnia
Duration:	48 hours
Test:	EC50
Result:	9268 mg/L

Product/substance	ethanol;ethyl alcohol
Duration:	48 hours
Test:	LC50
Result:	8140 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Daphnia
Duration:	24 hours
Test:	EC50
Result:	10800 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Algae
Duration:	72 hours
Test:	IC50
Result:	>10.9 mg/L

Product/substance	ethanol;ethyl alcohol
Duration:	96 hours
Test:	LC50
Result:	11000 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Fish
Duration:	24 hours
Test:	LC50
Result:	11200 mg/L

Product/substance	ethanol;ethyl alcohol
Duration:	16 hours
Test:	IC50
Result:	6500 mg/L

Based on available data, the classification criteria are not met.

12.2. Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. Bioaccumulative potential

Based on available data, the classification criteria are not met.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Other adverse effects

None known.

SECTION 13: Disposal considerations

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)

None of the components are listed

Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
DOT	UN1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	Transport hazard class: 3 Label: 3 Classification code: F1 	III	No	Limited quantities: 5 L Tunnel restriction code: (D/E) See below for additional information.
IMDG	UN1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	Transport hazard class: 3 Label: 3 Classification code: F1 	III	No	Limited quantities: 5 L EmS: F-E S-D See below for additional information.
IATA	UN1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	Transport hazard class: 3 Label: 3 Classification code: F1 	III	No	See below for additional information.

* Packing group

** Environmental hazards

Additional information

This product is within scope of the regulations of transport of dangerous goods.

DOT / See § 172.101 Hazardous Materials Table for any information on special provisions, requirements, or warnings in connection with transport. See § 172.602, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

15.2. U.S. Federal regulations

TSCA (the non-confidential portion)

ethanol;ethyl alcohol is listed

Clean Air Act

None of the components are listed

EPCRA Section 302

None of the components are listed

EPCRA Section 304

None of the components are listed

EPCRA section 313

None of the components are listed

CERCLA

None of the components are listed

Hazardous chemical inventory reporting

State regulations

California / Prop. 65

None of the components are listed

Massachusetts / Right To Know Act

ethanol;ethyl alcohol is listed

New Jersey / Right To Know Act

ethanol;ethyl alcohol / Substance number: 0844

ethanol;ethyl alcohol is on the Special Health Hazard Substance List

—

New York / Right To Know Act

ethanol;ethyl alcohol is listed

ethanol;ethyl alcohol is regulated with a Treshold Reporting Quantity (TRQ) of: 0 pounds

—

Pennsylvania / Right To Know Act

ethanol;ethyl alcohol is listed

—

15.4. Restrictions for application

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

15.5. Demands for specific education

No specific requirements.

15.6. Additional information

Not applicable.

15.7. Chemical safety assessment

No

15.8. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H225, Highly flammable liquid and vapour.

The full text of identified uses as mentioned in section 1

None known.

Abbreviations and acronyms

ACGIH = American Conference of Governmental Industrial Hygienists
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CERCLA = Comprehensive Environmental Response Compensation and Liability Act
DOT = Department of Transportation
EINECS = European Inventory of Existing Commercial chemical Substances
EPCRA = Emergency Planning and Community Right-To-Know Act
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HCIS = Hazardous Chemical Information System
HNOC = Hazards Not Otherwise Classified
IARC = International Agency for Research on Cancer

IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogKow = logarithm of the n-octanol/water coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
OECD = Organisation for Economic Co-operation and Development
OSHA = Occupational Safety and Health Administration
PBT = Persistent, Bioaccumulative and Toxic
RCRA = Resource Conservation and Recovery Act
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard to physical hazards has been based on experimental data.

The safety data sheet is validated by

Stephan Björk

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: US-en

SAFETY DATA SHEET

CaptureSelect™ Fc

SECTION 1: Identification

1.1. Product identifier

▼Trade name

CaptureSelect™ Fc

Product no.

CS-FC1-005, CS-FC1-100, CS-FC1-1000, A2-FR2-005, A2-FR2-010, A2-FR2-025, A2-FR2-100, A2-FR2-1000, A2-AFK-005, A2-AFK-025, A2-AFK-100, A2-AFK-1000, A2-FZ2-005, A2-FZ2-025, L1-T01-200, L1-T02-200, CS-FC3-005, T1-TGF-010, T1-TGA-010, T1-AZ1-001, T1-AZ2-001

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

Relevant identified uses of the substance or mixture

For Research use only, Antibody purification
Restricted to professional and industrial use.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Genovis AB
Box 4
244 21 Kävlinge
Sweden
+46 (0)46 10 12 30
www.genovis.com

E-mail

info@genovis.com

SDS date

4/21/2026

SDS Version

3.0

Date of previous version

4/21/2026 (2.0)

1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (triage.webpoisoncontrol.org) to get specific guidance for your case
See also section 4 “First aid measures”.

SECTION 2: Hazard(s) identification

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.1. Classification of the substance or mixture

Flam. Liq. 3; H226, Flammable liquid and vapour.

2.2. Label elements

Hazard pictogram(s)

Signal word
Warning

Hazard statement(s)
Flammable liquid and vapour. (H226)

Precautionary statement(s)

General
Not applicable.

Prevention
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)

Response
In case of fire: Use water mist/carbon dioxide/alcohol-resistant foam to extinguish. (P370+P378)

Storage
Store in a well-ventilated place. Keep cool. (P403+P235)

Disposal
Dispose of contents/container in accordance with local regulation.
(P501)

SECTION 3: Composition/Information on Ingredients

3.1. Substances
Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
ethanol;ethyl alcohol	CAS No.: 64-17-5	10-20%	Flam. Liq. 2, H225	
CaptureSelect® Affinity Ligand	CAS No.:	1-10%		

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information
-

SECTION 4: First-aid measures

4.1. Description of first aid measures

General information
If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).
Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation
Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact
Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact
If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

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

None known.

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

Treat symptomatically.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Flammable liquid and vapour.

In use may form flammable/explosive vapour-air mixture.

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / CO2)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 “Disposal considerations” on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ground and bond container and receiving equipment.

Use explosion-proof electrical/lighting/ventilating equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Avoid contact during pregnancy and while nursing.
Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Take action to prevent static discharges.
Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Recommended storage material

Keep only in original packaging.

Liquid class

Flammable liquid / Class IC (NFPA 30)

Storage conditions

Dry, cool and well ventilated

Incompatible materials

Strong oxidizing agents

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanol;ethyl alcohol
Short term exposure limit (STEL) (ACGIH TLV) (ppm): 1000
Long term exposure limit (OSHA Table Z-1) (mg/m^3): 1900
Long term exposure limit (OSHA Table Z-1) (ppm): 1000

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.
Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure

No specific requirements.

Individual protection measures, such as personal protective equipment

Generally

Use only protective equipment with a recognized certification mark, e.g. the UL mark.

Respiratory Equipment

Type	Class	Colour	Standards
AX		Brown	EN14387

Skin protection

Recommended	Type/Category	Standards
Dedicated work clothing should be worn.	-	-

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Gloves	-	-	EN374

Eye protection

Type	Standards
Safety glasses	EN166

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state
Liquid

Color
Colourless

Odor
Alcohol odor

Odor threshold (ppm)
No data available.

pH
No data available

Density (g/cm^3)
No data available

Relative density
No data available

Kinematic viscosity
No data available

Particle characteristics
No data available

Phase changes

Melting point/freezing point (°F)
No data available

Softening point/range (°F)
Does not apply to liquids.

Boiling point (°F)
-

Boiling point (°C)

80

Vapor pressure
No data available

Relative vapor density
No data available

Decomposition temperature (°F)
No data available

Data on fire and explosion hazards

Flash point (°F)
-

Flash point (°C)
23

Flammability (°F)
The material is ignitable.

Auto-ignition temperature (°F)
No data available

Explosion limits (% v/v)
No data available

Solubility

Solubility in water
No data available

n-octanol/water coefficient (LogKow)
No data available

Solubility in fat (g/L)
No data available

9.2. Other information

Evaporation rate (n-butylacetate = 100)
No data available

Other physical and chemical parameters
No data available.

Oxidizing properties
No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
The product is stable under the conditions, noted in section 7 “Handling and storage”.

10.3. Possibility of hazardous reactions, including those associated with foreseeable emergencies
None known.

10.4. Conditions to avoid
Mechanical influences (e.g. Shock, pressure, impact, friction). Fire, sparks or other ignition sources.

10.5. Incompatible materials
Strong oxidizing agents

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Product/substance	ethanol;ethyl alcohol
Species:	Rabbit

Route of exposure:	Dermal
Test:	LD50 (24h)
Result:	>20000 mg/kg

Product/substance	ethanol;ethyl alcohol
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50 (4 hours)
Result:	124.7 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Rat
Route of exposure:	Oral
Test:	LD50 (24h)
Result:	6200 mg/kg

Based on available data, the classification criteria are not met.

Skin corrosion/irritation
Based on available data, the classification criteria are not met.

Serious eye damage/irritation
Based on available data, the classification criteria are not met.

Respiratory sensitisation
Based on available data, the classification criteria are not met.

Skin sensitisation
Based on available data, the classification criteria are not met.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Carcinogenicity
Based on available data, the classification criteria are not met.

Reproductive toxicity
Based on available data, the classification criteria are not met.

STOT-single exposure
Based on available data, the classification criteria are not met.

STOT-repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.

Long term effects
None known.

Other information
None known.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	ethanol;ethyl alcohol
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	13480 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	13480 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Daphnia
Duration:	48 hours
Test:	LC50
Result:	5400 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Daphnia
Duration:	48 hours
Test:	EC50
Result:	9268 mg/L

Product/substance	ethanol;ethyl alcohol
Duration:	48 hours
Test:	LC50
Result:	8140 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Daphnia
Duration:	24 hours
Test:	EC50
Result:	10800 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Algae
Duration:	72 hours
Test:	IC50
Result:	>10.9 mg/L

Product/substance	ethanol;ethyl alcohol
Duration:	96 hours
Test:	LC50
Result:	11000 mg/L

Product/substance	ethanol;ethyl alcohol
Species:	Fish
Duration:	24 hours
Test:	LC50
Result:	11200 mg/L

Product/substance	ethanol;ethyl alcohol
Duration:	16 hours
Test:	IC50
Result:	6500 mg/L

Based on available data, the classification criteria are not met.

12.2. Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. Bioaccumulative potential

Based on available data, the classification criteria are not met.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Other adverse effects

None known.

SECTION 13: Disposal considerations

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)

None of the components are listed

Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
DOT	UN1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	Transport hazard class: 3 Label: 3 Classification code: F1 	III	No	Limited quantities: 5 L Tunnel restriction code: (D/E) See below for additional information.
IMDG	UN1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	Transport hazard class: 3 Label: 3 Classification code: F1 	III	No	Limited quantities: 5 L EmS: F-E S-D See below for additional information.
IATA	UN1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	Transport hazard class: 3 Label: 3 Classification code: F1 	III	No	See below for additional information.

* Packing group

** Environmental hazards

Additional information

This product is within scope of the regulations of transport of dangerous goods.
DOT / See § 172.101 Hazardous Materials Table for any information on special provisions, requirements, or warnings in connection with transport. See § 172.602, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.
IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.
IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

15.2. U.S. Federal regulations

TSCA (the non-confidential portion)

ethanol;ethyl alcohol is listed

Clean Air Act

None of the components are listed

EPCRA Section 302

None of the components are listed

EPCRA Section 304

None of the components are listed

EPCRA section 313

None of the components are listed

CERCLA

None of the components are listed

Hazardous chemical inventory reporting

15.3. State regulations

California / Prop. 65

None of the components are listed

Massachusetts / Right To Know Act

ethanol;ethyl alcohol is listed

New Jersey / Right To Know Act

ethanol;ethyl alcohol / Substance number: 0844

ethanol;ethyl alcohol is on the Special Health Hazard Substance List

—

New York / Right To Know Act

ethanol;ethyl alcohol is listed

ethanol;ethyl alcohol is regulated with a Treshold Reporting Quantity (TRQ) of: 0 pounds

—

Pennsylvania / Right To Know Act

ethanol;ethyl alcohol is listed

—

15.4. Restrictions for application

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

15.5. Demands for specific education

No specific requirements.

15.6. Additional information

Not applicable.

15.7. Chemical safety assessment

No

15.8. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H225, Highly flammable liquid and vapour.

The full text of identified uses as mentioned in section 1

None known.

Abbreviations and acronyms

ACGIH = American Conference of Governmental Industrial Hygienists
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CERCLA = Comprehensive Environmental Response Compensation and Liability Act
DOT = Department of Transportation
EINECS = European Inventory of Existing Commercial chemical Substances

EPCRA = Emergency Planning and Community Right-To-Know Act
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HCIS = Hazardous Chemical Information System
HNOC = Hazards Not Otherwise Classified
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogKow = logarithm of the n-octanol/water coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
OECD = Organisation for Economic Co-operation and Development
OSHA = Occupational Safety and Health Administration
PBT = Persistent, Bioaccumulative and Toxic
RCRA = Resource Conservation and Recovery Act
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard to physical hazards has been based on experimental data.

The safety data sheet is validated by

Stephan Björk

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: US-en