

Alphacool ES Liquid GL50 (-40°C) 1000ml

Revision date: 06.03.2026

Product code: 1015596

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

1.1. Product identifier

Alphacool ES Liquid GL50 (-40°C) 1000ml

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

Use of the substance/mixture

Heat transferring agent

1.3. Details of the supplier of the safety data sheet

Company name:	Alphacool International GmbH	
	Tochtergesellschaft	
Street:	Marienberger Str. 1	
Place:	D-38122 Braunschweig	
Telephone:	+49 (0) 531 28874 - 0	Telefax: +49 (0) 531 28874 - 22
E-mail:	info@alphacool.com	
Contact person:	Thomas Schäfer	Telephone: 0531 28874-0
E-mail:	+49 (0) 531 28874 - 0	
Internet:	www.alphacool.com	
Responsible Department:	Forschung & Entwicklung	

1.4. Emergency telephone number:

+49 (0) 6131 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Acute Tox. 1; H310
Acute Tox. 2; H300
Skin Irrit. 2; H315
Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

ethanediol; ethylene glycol
Potassium 3,5,5-trimethylhexanoate

Signal word: Danger

Pictograms:



Hazard statements

H300+H310	Fatal if swallowed or in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Precautionary statements

P262	Do not get in eyes, on skin, or on clothing.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing

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P301+P310	protection.
P321	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P330	Specific treatment (see ... on this label).
P302+P352	Rinse mouth.
P310	IF ON SKIN: Wash with plenty of
P321	Immediately call a POISON CENTER/doctor.
P361+P364	Specific treatment (see ... on this label).
P305+P351+P338	Take off immediately all contaminated clothing and wash it before reuse.
P337+P313	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405	If eye irritation persists: Get medical advice/attention.
P501	Store locked up.
	Dispose of contents/container to Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften..

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Pictograms:



Hazard statements

H300+H310

Precautionary statements

P262-P264-P270-P280-P301+P310-P321-P330-P302+P352-P310-P321-P361+P364-P405-P501

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
107-21-1	ethanediol; ethylene glycol			50-53 %
	203-473-3	603-027-00-1		
	Acute Tox. 4; H302			
7732-18-5	water			47-50 %
	213-791-2			
93918-10-6	Potassium 3,5,5-trimethylhexanoate			0.6-0.8 %
	Acute Tox. 4, Skin Corr. 1, Eye Dam. 1; H302 H314 H318			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
107-21-1	203-473-3	ethanediol; ethylene glycol	50-53 %
	dermal: LD50 = 10600 mg/kg; oral: ATE = 500 mg/kg		
93918-10-6		Potassium 3,5,5-trimethylhexanoate	0.6-0.8 %
	oral: ATE = 500 mg/kg		

Safety Data Sheet

according to UK REACH Regulation

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

After inhalation

Provide fresh air. Call a doctor if you feel unwell.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. non-irritant.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist. In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink 1 glass of water. Medical treatment necessary. IF SWALLOWED: Immediately call 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

Treat symptomatically. No further relevant information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings. Foam, Extinguishing powder, Sand

Unsuitable extinguishing media

Wasser

5.2. Special hazards arising from the substance or mixture

Non-flammable. In case of fire may be liberated: Gases/vapours, toxic

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Use suitable breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Use suitable breathing apparatus. Provide adequate ventilation. Special danger of slipping by leaking/spilling product. Use of protective clothing

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Dilute with plenty of water.

6.3. Methods and material for containment and cleaning up

For containment

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Provide adequate ventilation.

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For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Provide adequate ventilation as well as local exhaustion at critical locations. Avoid: generation/formation of aerosols

Advice on protection against fire and explosion

Use suitable breathing apparatus.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Keep away from: Food and feedingstuffs Wash hands before breaks and after work. Separate storage of work clothes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. No special measures are necessary.

Hints on joint storage

No special measures are necessary.

Further information on storage conditions

none

7.3. Specific end use(s)

Heat transferring agent

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL

8.2. Exposure controls



Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye protection/face protection. Dichtschließende Schutzbrille.

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Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Use of protective clothing.

Respiratory protection

Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition umluftunabhängiges Atemschutzgerät verwenden.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	blue
Odour:	produktspezifisch
Odour threshold:	not determined

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	106 °C
Flammability:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not applicable
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value (at 7-8 °C):	bei 20°C
Viscosity / kinematic:	not determined
Water solubility:	easily soluble
Solubility in other solvents	
not determined	
Dissolution rate:	not determined
Partition coefficient n-octanol/water:	not determined
Dispersion stability:	not determined
Vapour pressure:	not determined
Vapour pressure:	not determined
Density (at 20 °C):	1,095 g/cm ³
Relative density:	not determined
Bulk density:	not determined
Relative vapour density:	not determined
Particle characteristics:	not determined

Test method

ASTM D 2879

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

Other safety characteristics

Evaporation rate:	not determined
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Solvent separation test:	not determined
Solvent content:	47-50%
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
Viscosity / dynamic:	not determined ASTM D 2196
Flow time:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No further relevant information available.

10.2. Chemical stability

Thermal decomposition Thermal decomposition/ Conditions to avoid : No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

No further relevant information available.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

Carbon monoxide
aldehydes
Gases/vapours, toxic
Carbon dioxide

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Harmful if swallowed.

ATEmix tested

	Dose	Species	Source
LD50, oral	5.840 mg/kg	(rat)	
LD50, dermal	9.530 mg/kg	(rabbit)	

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	ethanediol; ethylene glycol				
	oral	ATE 500 mg/kg			
	dermal	LD50 10600 mg/kg	Rabbit	GESTIS	
93918-10-6	Potassium 3,5,5-trimethylhexanoate				
	oral	ATE 500 mg/kg			

Irritation and corrosivity

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

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Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

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

11.2. Information on other hazards

Further information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity : No further relevant information available.

12.2. Persistence and degradability

No further relevant information available.

12.3. Bioaccumulative potential

No further relevant information available.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol; ethylene glycol	-1,36

12.4. Mobility in soil

No further relevant information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
not applicable

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Das Produkt enthält keine Stoffe mit endokrinschädlichen Eigenschaften .

12.7. Other adverse effects

No further relevant information available.

Further information

Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend

Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.

List of Wastes Code - residues/unused products

070213 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; waste plastic

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Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.
Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.
Danger releasing substance:	not applicable

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Directive 2004/42/EC on VOC in paints and varnishes:	67 % (733,65 g/l)
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Information according to Directive 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)
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National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,5,8,9,11,12,13.

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Abbreviations and acronyms

Acute Tox: Acute toxicity
 Skin Irrit: Skin irritation
 Skin Corr: Skin corrosion
 Eye Dam: Eye damage
 Eye Irrit: Eye irritation
 CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 CAS: Chemical Abstracts Service
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 ADR: Accord européen sur le transport des marchandises dangereuses par Route
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Regulations concerning the international carriage of dangerous goods by rail
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 VOC: Volatile Organic Compounds
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>
 For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Acute Tox. 1; H310	On basis of test data
Acute Tox. 2; H300	On basis of test data
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method

Relevant H and EUH statements (number and full text)

H300 Fatal if swallowed.
 H300+H310 Fatal if swallowed or in contact with skin.
 H302 Harmful if swallowed.
 H310 Fatal in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible

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for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)