

**Alphacool ES Liquid GL50 (-40°C)**

Revision: 12.08.2026

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)

**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

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Responsible Department: Forschung &amp; Entwicklung

**1.4. Emergency telephone number:**

+49 (0) 6131 19240

**SECTION 2: Hazards identification**
**2.1. Classification of the substance or mixture**
**Regulation (EC) No 1272/2008**

Acute Tox. 4; H302

STOT RE 2; H373

Full text of hazard statements: see SECTION 16.

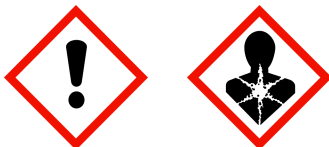
**2.2. Label elements**
**Regulation (EC) No 1272/2008**
**Hazard components for labelling**

ethanediol; ethylene glycol

Potassium 3,5,5-trimethylhexanoate

Signal word: Danger

Pictograms:


**Hazard statements**

H302

Harmful if swallowed.

H319

Causes serious eye irritation.

H373

May cause damage to kidneys through prolonged or repeated exposure if swallowed.

**Precautionary statements**

P101

If medical advice is needed, have product container or label at hand.

P102

Keep out of reach of children.

P103

Read carefully and follow all instructions.

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P264

Wash hands thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

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- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P330 Rinse mouth.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P314 Get medical advice/attention if you feel unwell.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P501 Dispose of contents/container to an appropriate recycling or disposal facility.

**Labelling of packages where the contents do not exceed 125 ml**
**Signal word:**

Danger

**Pictograms:**

**Precautionary statements**

P264-P270-P280-P301+P310-P330-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 (Regulation (EC) No 1272/2008)          |              |          |           |
| 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                             |           |

### 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.

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**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.

**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

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**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 <sup>3</sup> | 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.

**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.

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**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    |

**Test method**

|                                                           |                         |             |
|-----------------------------------------------------------|-------------------------|-------------|
| Melting point/freezing point:                             | <-18 °C                 |             |
| Boiling point or initial boiling point and boiling range: | >160 °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          | ASTM D 2879 |
| Vapour pressure:                                          | not determined          |             |
| Density (at 20 °C):                                       | 1,125 g/cm <sup>3</sup> |             |
| Relative density:                                         | not determined          |             |
| Bulk density:                                             | not determined          |             |
| Relative vapour density:                                  | not determined          |             |
| Particle characteristics:                                 | not determined          |             |

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

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**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**
**Acute toxicity**

Harmful if swallowed.

**ATEmix tested**

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

**ATEmix calculated**

ATE (inhalation vapour) &gt; 20 mg/l; ATE (inhalation dust/mist) &gt; 5 mg/l

| 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.

**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.

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**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

**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)****14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

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**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.

**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.

**14.4. Packing group:** 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)

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**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**

For this mixture a chemical safety assessment has been carried out.

**SECTION 16: Other information**
**Changes**

This data sheet contains changes from the previous version in section(s): 2,5,8,9,11,12,13,15.

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**Abbreviations and acronyms**

Acute Tox. 4: Acute toxicity, hazard category 4  
Skin Corr. 1: Skin corrosion, hazard category 1  
Eye Dam. 1: Serious eye damage, hazard category 1  
STOT RE 2: Specific target organ toxicity - repeated exposure, hazard category 2  
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).

**Relevant H and EUH statements (number and full text)**

|      |                                                                                  |
|------|----------------------------------------------------------------------------------|
| H302 | Harmful if swallowed.                                                            |
| H314 | Causes severe skin burns and eye damage.                                         |
| H318 | Causes serious eye damage.                                                       |
| H319 | Causes serious eye irritation.                                                   |
| H373 | May cause damage to kidneys through prolonged or repeated exposure if swallowed. |
| H373 | May cause damage to organs through prolonged or repeated exposure.               |

**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 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.)*