

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 28.11.2023

Version number 1

Revision: 28.11.2023

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

· **1.1 Product identifier**

· **Trade name:** AlphaPlus 1-Decene

· **Article number:** 1609

· **CAS Number:**

872-05-9

· **EC number:**

212-819-2

· **Registration number** 01-2119486878-12

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

No further relevant information available.

· **Application of the substance / the mixture**

Use as an intermediate

Formulation

Use in coatings – industrial

Use in Coatings - Consumer

Use in Oil and Gas field drilling and production operations -industrial

Use in polymer production – industrial

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Möller Chemie GmbH & Co. KG

Bürgerkamp 1

D-48565 Steinfurt

Tel.: 02551/9340-0

Fax: 02551/9340-60

· **Further information obtainable from:** Product safety department

· **1.4 Emergency telephone number:**

Poison Control Center Mainz - 24 hour emergency service - Tel.: +49 (0) 6131/19240

### SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3

H226 Flammable liquid and vapour.



GHS08 health hazard

Asp. Tox. 1

H304 May be fatal if swallowed and enters airways.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

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**· Hazard pictograms**

GHS02   GHS08   GHS09

**· Signal word** *Danger***· Hazard statements***H226 Flammable liquid and vapour.**H304 May be fatal if swallowed and enters airways.**H410 Very toxic to aquatic life with long lasting effects.***· Precautionary statements***P210      Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**P301+P310      IF SWALLOWED: Immediately call a POISON CENTER/ doctor.**P331      Do NOT induce vomiting.**P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].**P405      Store locked up.**P501      Dispose of contents/container in accordance with local/regional/national/international regulations.***· 2.3 Other hazards***The substance/mixture does not contain any components that are to be classified according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 at levels of 0.1% or more have endocrine disrupting properties.***· Results of PBT and vPvB assessment****· PBT:***The product does not contain any substances above legal limits that meet the criteria for PBT (persistent, bioaccumulative and toxic).***· vPvB:***The product does not contain any substances above legal limits that meet the criteria for vPvB (very persistent and very bioaccumulative).*

### SECTION 3: Composition/information on ingredients

**· 3.1 Substances****· CAS No. Description***872-05-9 1-Decene***· Identification number(s)****· EC number:** 212-819-2**· Additional information:***Hazardous ingredients:**2-Butyl-1-Hexene, CAS: 6795-79-5 1 - 5%**Flam. Liq. 3; H226, Asp. Tox. 1; H304**2-Ethyl-1-Octene, CAS: 51655-64-2 1 - 5%**Flam. Liq. 3; H226, Asp. Tox. 1; H304*

### SECTION 4: First aid measures

**· 4.1 Description of first aid measures****· General information:***Take affected persons out of danger area and lay down.**Show this safety data sheet to the doctor in attendance.**Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

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- **After inhalation:**  
Move affected person out of the danger zone and into fresh air.  
In case of unconsciousness place patient stably in side position for transportation.  
Consult a doctor if breathing difficulties persist.
- **After skin contact:**  
In case of contact with the skin, take off soiled, soaked clothing immediately and wash the skin immediately with plenty of water and soap.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. Then consult a doctor.  
Remove any contact lenses if possible. Rinse further.
- **After swallowing:**  
Keep airways clear.  
Do not give milk or alcoholic drinks.  
Never give anything by mouth to an unconscious person.  
If the problems are persistent, consult a doctor.  
Do not induce vomiting.
- **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**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>), dry chemical
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon oxides
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Provide adequate ventilation.
- **6.2 Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Contain with non-flammable absorbent material (e.g. sand, earth, kieselguhr, vermiculite) and place in containers for disposal in accordance with local / national regulations (see Section 13). Keep in suitable, closed containers for disposal.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Prevent formation of aerosols.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.

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Protect against electrostatic charges.

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Keep container tightly closed and store in a dry and well-ventilated place.
- **Information about storage in one common storage facility:** See section 10.5
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:**  
3  
flammable
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **PNECs**  
Fresh water: 0.0012 mg/l  
Sea water: 0.0012 mg/l  
Freshwater sediment: 2.14 mg/kg  
Marine sediment: 2.14 mg/kg  
Soil: 0.43 mg/kg
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**  
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:** Not required.
- **Hand protection**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye/face protection**



Tightly sealed goggles

- **Body protection:** chemical protective suit

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Fluid
- **Colour:** Colourless

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· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.
· <b>Melting point/freezing point:</b>	-66.3 °C
· <b>Boiling point or initial boiling point and boiling range</b>	170.56 °C
· <b>Flammability</b>	Not applicable.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	0.7 Vol %
· <b>Upper:</b>	5.9 Vol %
· <b>Flash point:</b>	49 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	Not determined.
· <b>Kinematic viscosity at 20 °C</b>	1.1 cSt
· <b>Dynamic:</b>	Not determined.
· <b>Solubility</b>	
· <b>water:</b>	Insoluble. Soluble in hydrocarbon solvents
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure at 25 °C:</b>	0.21 kPa
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	0.740 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.

· **9.2 Other information**

· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Ignition temperature:</b>	Not determined.
· <b>Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	Not determined.

· **Information with regard to physical hazard classes**

· <b>Explosives</b>	Void
· <b>Flammable gases</b>	Void
· <b>Aerosols</b>	Void
· <b>Oxidising gases</b>	Void
· <b>Gases under pressure</b>	Void
· <b>Flammable liquids</b>	Flammable liquid and vapour.
· <b>Flammable solids</b>	Void
· <b>Self-reactive substances and mixtures</b>	Void
· <b>Pyrophoric liquids</b>	Void
· <b>Pyrophoric solids</b>	Void
· <b>Self-heating substances and mixtures</b>	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
· <b>Oxidising liquids</b>	Void
· <b>Oxidising solids</b>	Void
· <b>Organic peroxides</b>	Void
· <b>Corrosive to metals</b>	Void
· <b>Desensitised explosives</b>	Void

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### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**  
The product is stable if the regulations / instructions for storage and handling are observed.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Avoid all sources of ignition: heat, sparks, open flames.
- **10.5 Incompatible materials:**  
May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
- **10.6 Hazardous decomposition products:**  
carbon oxides  
No hazardous decomposition products if stored and handled as prescribed/indicated become.

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**  
LD50/oral/rat: > 3.575 mg/kg  
Gender: male and female  
Method: Fixed dose method  
The information provided is based on data for similar substances.  
LC50/4h/inhalative/rat: > 2.1 mg/kg  
Gender: male and female  
Test atmosphere: steam  
Method: OECD Test Guideline 403  
The information provided is based on data for similar substances.  
However, not classified based on conclusive data.  
Not sufficient for classification.  
LD50/dermal/rat: > 2.000 mg/kg  
Gender: male and female  
Method: OECD Test Guideline 402  
The information provided is based on data for similar substances.
- **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 or 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** May be fatal if swallowed and enters airways.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**  
Toxicity to fish  
LC50/96h: 0.12 mg/l *Oncorhynchus mykiss* (rainbow trout)  
semi-static test method: OECD Test Guideline 203  
The information provided is based on data for similar substances.  
Toxicity to daphnia and other aquatic invertebrates  
EC50/48h: 0.56 - 1 mg/l Species: *Daphnia* (water flea)  
Method: OECD Test Guideline 202

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**Toxicity to algae**EC50/72h: 1 - 1.8 mg/l Species: *Pseudokirchneriella subcapitata* (single-celled green algae)

Method: OECD Test Guideline 201

M factor:

M-Factor (Acute Aquat. Tox.) 1

M-Factor (Chron. Aquat. Tox.) 1

Toxicity to daphnia and other aquatic invertebrates (chronic toxicity)

NOEC: 0.0194 mg/l

Exposure time: 21 d

Species: *Daphnia magna* (water flea)

Analytical monitoring: yes

Test substance: yes



Method: OECD Test Guideline 211

- **12.2 Persistence and degradability** Easily biodegradable
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** The product is not considered to be persistent, bioaccumulating nor toxic (PBT).
- **vPvB:** The product is not considered to be persistent or very bioaccumulative (vPvB).
- **12.6 Endocrine disrupting properties**
- The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
- Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water
- Do not allow product to reach ground water, water course or sewage system, even in small quantities.
- Danger to drinking water if even extremely small quantities leak into the ground.
- Also poisonous for fish and plankton in water bodies.
- Very toxic for aquatic organisms

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Disposal must be made according to official regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN number or ID number</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                   | UN3295  |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | 3295 HYDROCARBONS, LIQUID, N.O.S., ENVIRONMENTALLY HAZARDOUS<br>HYDROCARBONS, LIQUID, N.O.S.  |
| <ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR</b></li> </ul>                           | <div style="display: flex; align-items: center; gap: 10px;">   </div> |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> </ul>   | 3 (F1) Flammable liquids.   |

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· <b>Label</b>	3
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids.
· <b>Label</b>	3
· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	III
· <b>14.5 Environmental hazards:</b> · <b>Special marking (ADR):</b>	Environmentally hazardous substance, liquid Symbol (fish and tree)
· <b>14.6 Special precautions for user</b> · <b>Hazard identification number (Kemler code):</b> · <b>EMS Number:</b> · <b>Stowage Category</b>	Warning: Flammable liquids. 30 F-E,S-D A
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>Transport category</b> · <b>Tunnel restriction code</b>	3 D/E
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 3295 HYDROCARBONS, LIQUID, N.O.S. 3, III, ENVIRONMENTALLY HAZARDOUS

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category**  
E1 Hazardous to the Aquatic Environment  
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
Substance is not listed.

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- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**  
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

### **SECTION 16: Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** Product safety department
- **Contact:** Mrs. Steyer
- **Abbreviations and acronyms:**

*ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*PNEC: Predicted No-Effect Concentration (REACH)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Flam. Liq. 3: Flammable liquids – Category 3*

*Asp. Tox. 1: Aspiration hazard – Category 1*

*Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1*

*Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1*