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

### 1.1. Product identifier

**Product form:** Mixture
**Product name:** Aqua Spacer
**UFI:** -

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

**Relevant identified uses:** Manufacturing of dental prosthesis in dental laboratories
**Uses advised against:** Do not use outside of the dental laboratory.

### 1.3. Details of the supplier of the safety data sheet

**Manufacturer/Supplier:** al dente Dentalprodukte GmbH
Street / mailbox: Borsigstr. 1
Country code / postal code / city: D - 38644 Goslar
Phone: 0 53 21 / 80031
Fax: 0 53 21 / 50881
E-mail / Website: info@aldente.de / www.aldente.de
Information department: al dente Dentalprodukte GmbH

### 1.4. Emergency telephone number

**al dente Dentalprodukte GmbH:** +49 (0) 53 21 / 80031 (Mo-Fr 8:00-16:00)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**
Flammable liquids, Category 2, H225
Serious eye damage/eye irritation, Category 2, H319
Full text of H statements: see section 16.

**Adverse physicochemical, human health and environmental effects**
Highly flammable liquid and vapour. Causes serious eye irritation.

### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**
**Hazard pictograms (CLP):**

GHS02 GHS07

**Signal word (CLP):** Danger
**Hazard statements (CLP):**
H225 - Highly flammable liquid and vapour
H319 - Causes serious eye irritation

**Precautionary statements (CLP):**
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P280 - Wear protective gloves, protective clothing, eye protection
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 - If eye irritation persists: Get medical advice/attention
P403+P235 - Store in a well-ventilated place. Keep cool

### 2.3. Other hazards

**Results of PBT and vPvB assessment**

**PBT:** Not applicable
**vPvB:** Not applicable

## SECTION 3: Composition/information on ingredients

**3.1. Substances:** Not applicable

**3.2. Mixtures**

**Components:**

| | | |
|---|---|---|
| (CAS no) 64-17-5<br>(EC no) 200-578-6<br>(REACH no) 01-2119457610-43-xxxx | Ethanol<br>Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>(C ≥ 50 %) Eye Irrit. 2, H319 | 65 - 85 % |
| (CAS no) 112945-52-5<br>(EC no) 231-545-4<br>(REACH no) 01-2119379499-16-xxxx | Amorphous silica<br>Not classified | 10 - 20 % |
| (CAS no) 1344-28-1<br>(EC no) 215-691-6<br>(REACH no) 01-2119529248-35-xxxx | Aluminium oxide<br>Not classified | 10 - 20 % |
| (CAS no) 13463-67-7<br>(EC no) 236-675-5 | Titanium dioxide<br>Not classified | 1 - 5 % |
| (CAS no) 7440-50-8<br>(EC no) 231-159-6 | Copper<br>Acute Tox. 4, H302<br>Aquatic Acute 1, H400<br>Aquatic Chronic 2, H411 | < 0.5 % |

Full text of H statements: see section 16.

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

**First-aid measures general:** Call a doctor if you feel unwell. If possible show him this sheet. Failing this, show him the packaging or label. Never give anything by mouth to an unconscious person. Place the affected person in the recovery position.

**First-aid measures after inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

**First-aid measures after skin contact:** Take off contaminated clothing. Wash with plenty of soap and water.

**First-aid measures after eye contact:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**First-aid measures after ingestion:** Rinse mouth. Drink water as a precaution. Do NOT induce vomiting.

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

**Symptoms/injuries after eye contact:** Causes serious eye irritation.

**Other symptoms/injuries:** Dizziness. Drowsiness. Nausea. Vomiting. Loss of consciousness.

**4.3. Indication of any immediate medical attention and special treatment needed:** Treat symptomatically.

## SECTION 5: Firefighting measures

**5.1. Extinguishing media**

**Suitable extinguishing media:** Dry extinguishing powder. Foam. Water spray.

**Unsuitable extinguishing media:** Do not use a heavy water stream.

**5.2. Special hazards arising from the substance or mixture**

**Fire hazard:** Highly flammable liquid and vapour.

**Explosion hazard:** May form flammable/explosive vapour-air mixture.

**Hazardous decomposition products in case of fire:** Toxic fumes may be released. Carbon monoxide. Carbon dioxide.

**5.3. Advice for firefighters**

**Firefighting instructions:** Use water spray or fog for cooling exposed containers. Do not dispose of fire-fighting water in the environment.

**Protection during firefighting:** Use a self-contained breathing apparatus and also a protective suit.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

**General measures:** Provide adequate ventilation. Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Stop leak if safe to do so. Use personal protective equipment as required. Avoid contact with skin and eyes. Do not breathe vapour/aerosol.

**For non-emergency personnel**

**Emergency procedures:** Evacuate unnecessary personnel.

**For emergency responders**

**Protective equipment:** Wear personal protective equipment. Use self-contained breathing apparatus.

**6.2. Environmental precautions:** Prevent entry to sewers and public waters.

**6.3. Methods and material for containment and cleaning up:** Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Dispose of in accordance with relevant local regulations.

**6.4. Reference to other sections:** Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

**Additional hazards when processed:** Handle empty containers with care because residual vapours are flammable.

**Precautions for safe handling:** Provide good ventilation in process area to prevent formation of vapour. Remove ignition sources. No open flames. No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Wear personal protective

clothing. Do not breathe vapour/aerosol. Avoid contact with skin and eyes.

**Information on fire and explosion protection:** May form flammable/explosive vapour-air mixture.

**Hygiene measures:** Handle in accordance with good industrial hygiene and safety procedures. When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and containers**

**Technical measures:** Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting equipment.

**Storage conditions:** Store in original container. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Protect from sunlight. Keep in fireproof place. Store locked up. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Prohibitions on mixed storage:** Keep away from food, drink and animal feedingstuffs.

**7.3. Specific end use(s):** No additional information available

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters**

| **Components with critical values that require monitoring at the workplace:** | | |
|---|---|---|
| **Ethanol (64-17-5)** | | |
| Ireland | Local name | Ethanol |
| Ireland | OEL (15 min ref) (ppm) | 1000 ppm |
| **Amorphous silica (112945-52-5)** | | |
| Ireland | Local name | Silica, amorphous |
| Ireland | OEL (8 hours ref) (mg/m³) | 6 mg/m³ (total inhalable dust)<br>2.4 mg/m³ (respirable dust) |
| **Aluminium oxide (1344-28-1)** | | |
| Ireland | Local name | Aluminium oxides |
| Ireland | OEL (8 hours ref) (mg/m³) | 10 mg/m³ (total inhalable dust)<br>4 mg/m³ (respirable dust) |
| **Titanium dioxide (13463-67-7)** | | |
| Ireland | Local name | Titanium dioxide |
| Ireland | OEL (8 hours ref) (mg/m³) | 10 mg/m³ (total inhalable dust)<br>4 mg/m³ (respirable dust) |
| **Copper (7440-50-8)** | | |
| Ireland | Local name | Copper (as Cu) |
| Ireland | OEL (8 hours ref) (ppm) | 0.2 mg/m³ (Fume)<br>1 mg/m³ (Dust and mists) |

| **Ethanol (64-17-5)** |
|---|

| | |
|---|---|
| **DNEL/DMEL (Workers)** | |
| Long-term - systemic effects, inhalation | 380 mg/m³ |
| **DNEL/DMEL (General population)** | |
| Long-term - systemic effects, inhalation | 114 mg/m³ |
| **PNEC (Water)** | |
| PNEC aqua (freshwater) | 0.96 mg/l |
| PNEC aqua (marine water) | 0.79 mg/l |
| PNEC aqua (intermittent, freshwater) | 2.75 mg/l |
| **PNEC (Sediment)** | |
| PNEC sediment (freshwater) | 3.6 mg/kg dwt |
| PNEC sediment (marine water) | 2.9 mg/kg dwt |
| **PNEC (Soil)** | |
| PNEC soil | 0.63 mg/kg dwt |
| **PNEC (Oral)** | |
| PNEC oral (secondary poisoning) | 0.38 mg/kg food |
| **PNEC (STP)** | |
| PNEC sewage treatment plant | 580 mg/l |
| **Aluminium oxide (1344-28-1)** | |
| **DNEL/DMEL (Workers)** | |
| Long-term - systemic effects, inhalation | 3 mg/m³ |
| Long-term - local effects, inhalation | 3 mg/m³ |
| **DNEL/DMEL (General population)** | |
| Long-term - systemic effects, inhalation | 0.75 mg/m³ |
| Long-term - local effects, inhalation | 0.75 mg/m³ |
| Long-term - local effects, oral | 1.32 mg/m³ bodyweight/day |

**8.2. Exposure controls**

**Appropriate engineering controls:** Provide local exhaust or general room ventilation to minimize vapour concentrations.

**Personal protective equipment**

**Eye protection:** Wear safety glasses (EN 166).

**Hand protection:** Wear suitable gloves (EN 374). Butyl rubber, ≥ 0.7 mm. The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed. Penetration time (min.): ≥ 480 min

**Skin and body protection:** Wear suitable protective clothing. Flame retardant antistatic protective clothing.

**Respiratory protection:** Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Breathing apparatus with filter type A.

**Environmental exposure controls:** Avoid release to the environment.

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state:** | Liquid |
| **Colour:** | tooth-coloured |
| **Odour:** | No data available |
| **Melting point/Freezing point:** | - 114,5°C |
| **Boiling point or initial boiling point and boiling range:** | 78°C |

| | |
|---|---|
| **Flammability:** | Highly flammable liquid and vapour |
| **Lower and upper explosion limit:** | 15,0 Vol% // 3,4 Vol% |
| **Flash point:** | 13°C |
| **Auto-ignition temperature:** | No data available |
| **Decomposition temperature:** | No data available |
| **pH:** | No data available |
| **Kinematic viscosity:** | No data available |
| **Solubility:** | No data available |
| **Partition coefficient n-octanol/water (log value):** | Not applicable |
| **Vapour pressure:** | 59 hPa bei 20 °C |
| **Density and/or relative density:** | No data available |
| **Relative vapour density:** | No data available |
| **Particle characteristics:** | Not applicable |

**9.2. Other information**

| | |
|---|---|
| **Explosive properties:** | May form flammable/explosive vapour-air mixture |
| **Oxidising properties:** | No oxidising properties |

## SECTION 10: Stability and reactivity

**10.1. Reactivity:** Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

**10.2. Chemical stability:** Stable under use and storage conditions as recommended in section 7.

**10.3. Possibility of hazardous reactions:** No dangerous reactions known under normal conditions of use.

**10.4. Conditions to avoid:** Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

**10.5. Incompatible materials:** Strong oxidizing agents. Strong acids. Strong bases.

**10.6. Hazardous decomposition products:** No hazardous decomposition products known. In case of fire: Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

## SECTION 11: Toxicological information

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Acute toxicity:** Not classified
Based on available data, the classification criteria are not met

| **Ethanol (64-17-5)** | |
|---|---|
| LD50 oral rat: | 10470 mg/kg |
| LC50 inhalation rat: | 124.7 mg/l/4h |
| **Aluminium oxide (1344-28-1)** | |
| LD50 oral rat: | > 15900 mg/kg |
| LC50 inhalation rat: | > 2.3 mg/l/4 h |

**Skin corrosion/irritation:** Not classified
Based on available data, the classification criteria are not met

**Serious eye damage/irritation:** Causes serious eye irritation

**Respiratory or skin sensitisation:** Not classified

| | |
|---|---|
| | Based on available data, the classification criteria are not met |
| **Germ cell mutagenicity:** | Not classified<br>Based on available data, the classification criteria are not met |
| **Carcinogenicity:** | Not classified<br>Based on available data, the classification criteria are not met |
| **Specific target organ toxicity (single exposure):** | Not classified<br>Based on available data, the classification criteria are not met |
| **Specific target organ toxicity (repeated exposure):** | Not classified<br>Based on available data, the classification criteria are not met |
| **Aspiration hazard:** | Not classified<br>Based on available data, the classification criteria are not met |

**11.2. Information on other hazards**

| | |
|---|---|
| **Potential adverse human health effects and symptoms:** | Based on available data, the classification criteria are not met |

## SECTION 12: Ecological information

**12.1. Toxicity**

| | |
|---|---|
| **Acute aquatic toxicity:** | Not classified |
| **Chronic aquatic toxicity:** | Not classified |
| **Ecology - general advice:** | Avoid release to the environment. Prevent entry to sewers and public waters. |

| **Ethanol (64-17-5)** | |
|---|---|
| LC50 fish: | 14200 mg/l 96 h, Pimephales promelas |
| EC50 daphnia: | 5012 mg/l 48 h, Ceriodaphnia dubia |
| EC50 algae: | 275 mg/l 72 h, Chlorella vulgaris |
| NOEC fish: | 250 mg/l 120 h, Danio rerio |
| NOEC daphnia: | 9.6 mg/l 10 d, Ceriodaphnia dubia |

**12.2. Persistence and degradability**

| **Ethanol (64-17-5)** | |
|---|---|
| Persistence and degradability: | Readily biodegradable. |
| Biodegradation: | 84 %, 20 d |

**12.3. Bioaccumulative potential**

| **Ethanol (64-17-5)** | |
|---|---|
| Log Pow: | -0.35 (20 °C) |

**12.4. Mobility in soil:** No additional information available

**12.5. Results of PBT and vPvB assessment**

| | |
|---|---|
| **PBT:** | Not applicable |
| **vPvB:** | Not applicable |

**12.6. Endocrine disrupting properties:** No additional information available

**12.7. Other adverse effects:** No additional information available

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

| | |
|---|---|
| **Regional legislation (waste):** | Dispose in a safe manner in accordance with local/national regulations. The product is to be classified as hazardous waste (waste paints). |
| **Waste disposal recommendations:** | Treat contaminated packaging like the product itself. |
| **Waste code - used product:** | The waste code number according to the Ordinance on the European Waste Catalogue (AVV) depends on the waste producer and can therefore vary for any given product. The waste code number is therefore to be gleaned separately from each waste producer. |
| **Additional information:** | Handle empty containers with care because residual vapours are flammable. Depending on the use. Do not perforate, cut or weld uncleaned containers. |

## SECTION 14: Transport information

**14.1. UN number or ID number**

| | |
|---|---|
| **UN-No. (ADR):** | UN 1170 |
| **UN-No. (IMDG):** | UN 1170 |
| **UN-No. (IATA):** | UN 1170 |

**14.2. UN proper shipping name**

| | |
|---|---|
| **Proper Shipping Name (ADR):** | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) |
| **Proper Shipping Name (IMDG):** | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) |
| **Proper Shipping Name (IATA):** | Ethanol solution |
| **Transport document description (ADR):** | UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II, (D/E) |
| **Transport document description (IMDG):** | UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II |
| **Transport document description (IATA):** | UN 1170 Ethanol solution, 3, III |

**14.3. Transport hazard class(es)**

**ADR**

**Transport hazard class(es) (ADR):** 3
**Danger labels (ADR):** 3


**IMDG**

**Transport hazard class(es) (IMDG):** 3
**Danger labels (IMDG):** 3


**IATA**

**Transport hazard class(es) (IATA):** 3
**Danger labels (IATA):** 3

**14.4. Packing group**

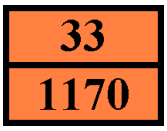
| | |
|---|---|
| **Packing group (ADR):** | II |
| **Packing group (IMDG):** | II |
| **Packing group (IATA):** | II |

**14.5. Environmental hazards**

| | |
|---|---|
| **Dangerous for the environment:** | No |
| **Marine pollutant:** | No |
| **Other information:** | No additional information available |

**14.6. Special precautions for user**

**Overland transport**

| | |
|---|---|
| **Classification code (ADR):** | F1 |
| **Special provisions (ADR):** | 144, 601 |
| **Limited quantities (ADR):** | 1l |
| **Excepted quantities (ADR):** | E2 |
| **Packing instructions (ADR):** | P001, IBC02, R001 |
| **Mixed packing provisions (ADR):** | MP19 |
| **Portable tank and bulk container instructions (ADR):** | T4 |
| **Portable tank and bulk container special provisions (ADR):** | TP1 |
| **Tank code (ADR):** | LGBF |
| **Vehicle for tank carriage:** | FL |
| **Transport category (ADR):** | 2 |
| **Special provisions for carriage - Operation (ADR):** | S2, S20 |
| **Hazard identification number (Kemler No.):** | 33 |
| **Orange plates:** |  |
| **Tunnel restriction code (ADR):** | D/E |



**Transport by sea**

| | |
|---|---|
| **Special provisions (IMDG):** | 144 |
| **Limited quantities (IMDG):** | 1 L |
| **Excepted quantities (IMDG):** | E2 |
| **Packing instructions (IMDG):** | P001 |
| **IBC packing instructions (IMDG):** | IBC02 |
| **Tank instructions (IMDG):** | T4 |
| **Tank special provisions (IMDG):** | TP1 |
| **EmS-No. (Fire):** | F-E |
| **EmS-No. (Spillage):** | S-D |
| **Stowage category (IMDG):** | A |

**Air transport**

| | |
|---|---|
| **PCA Excepted quantities (IATA):** | E2 |
| **PCA Limited quantities (IATA):** | Y341 |
| **PCA limited quantity max net quantity (IATA):** | 1L |
| **PCA packing instructions (IATA):** | 353 |
| **PCA max net quantity (IATA):** | 5L |
| **CAO packing instructions (IATA):** | 364 |

| | |
|---|---|
| **CAO max net quantity (IATA):** | 60L |
| **Special provisions (IATA):** | A3, A58, A180 |
| **ERG code (IATA):** | 3L |

**14.7. Maritime transport in bulk according to IMO instruments:** Not applicable

## SECTION 15: Regulatory information

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

**EU-Regulations**

Contains no substance on the REACH candidate list.
Contains no REACH Annex XIV substances.

**National regulations**

No additional information available

**15.2. Chemical safety assessment:** A chemical safety assessment has not been carried out.

## SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer.

**Changes compared to the previous version**

-

**Full text of H- and EUH-statements**

| | |
|---|---|
| H225: | Highly flammable liquid and vapour |
| H302: | Harmful if swallowed. |
| H319: | Causes serious eye irritation |
| H400: | Very toxic to aquatic life. |
| H411: | Toxic to aquatic life with long lasting effects. |

**Abbreviations and acronyms**

| | |
|---|---|
| ADR: | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| CLP: | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| DMEL: | Derived Minimal Effect Level |
| DNEL: | Derived No-Effect Level |
| EC50: | The effective concentration of substance that causes 50% of the maximum response (Median Effective Concentration) |
| IATA: | International Air Transport Association |
| IMDG: | “International Maritime Dangerous Goods Code” for the transport of dangerous goods by sea |
| LC50: | Lethal Concentration to 50 % of a test population (Median Lethal Concentration) |
| LD50: | Lethal Dose to 50% of a test population (Median Lethal Dose) |
| LOAEL: | No Observed Effect Concentration/Level |
| NOAEC/L: | Organisation for Economic Cooperation and Development |
| NOEC/L: | Persistent, Bioaccumulative and Toxic substance |
| OECD: | Predicted No-Effect Concentration |
| PBT: | Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals |

| | |
|---|---|
| PNEC: | Safety Data Sheet |
| REACH: | Sewage Treatment Plant |
| SDB (SDS): | Unique Formula Identifier |
| STP: | Very Persistent and Very Bioaccumulative |
| UFI: | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| vPvB: | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| Acute Tox. 4: | Acute toxicity, Category 4 |
| Aquatic Acute 1: | Hazardous to the aquatic environment - Acute Hazard, Category 1 |
| Aquatic Chronic 2: | Hazardous to the aquatic environment - Chronic Hazard, Category 2 |
| Eye Irrit. 2: | Serious eye damage/eye irritation, Category 2 |
| Flam. Liq. 2: | Flammable liquids, Category 2 |