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

1.1 Product identifier

Commercial product name: Instant Adhesive Rational

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

1.2.1 Relevant uses: Adhesive

1.2.2 Uses advised against: None known.

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
Further information obtainable from: al dente Dentalprodukte GmbH

1.4 Emergency telephone number

al dente Dentalprodukte GmbH: +49 (0) 53 21 / 80031 (Mon-Fri. 8 a.m. – 4 p.m.)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Eye Irrit. 2:	H319	Causes serious eye irritation.
Skin Irrit. 2:	H315	Causes skin irritation.
STOT SE 3:	H335	May cause respiratory irritation.

Classification

2.2 Label elements:

The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms



Signal word:

WARNING

Contains:

Ethyl-2-cyanoacrylate

Hazard statements

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P261	Avoid breathing vapours.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves / eye protection / face 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.
P312	Call a POISON CENTER / doctor /.../ if you feel unwell.
P405	Store locked up
P501	Dispose of contents/container in accordance with local/national regulation.

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Special labelling

EUH202

Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

2.3 Other hazards

Human health dangers:

People who are allergic to cyanacrylates should avoid the use of the product.

Other hazards:

No particular hazards known.

SECTION 3: Composition/information on ingredients

3.1 Substances:

Not applicable.

3.2 Mixtures:

The product is a mixture.

Range [%]	Substance
70 - 90	Ethyl-2-cyanoacrylate CAS: 7085-85-0, EINECS/ELINCS: 230-391-5, EU-INDEX: 607-236-00-9, Reg-No.: 01-2119527766-29-XXXX GHS/CLP: STOT SE 3: H335 - Eye Irrit. 2: H319 - Skin Irrit. 2: H315
0,01 - < 0,1	1,4-Dihydroxybenzene CAS: 123-31-9, EINECS/ELINCS: 204-617-8, EU-INDEX: 604-005-00-4 GHS/CLP: Carc. 2: H351 - Muta. 2: H341 - Acute Tox. 4: H302 - Eye Dam. 1: H318 - Skin Sens. 1: H317 - Aquatic Acute 1: H400, M-Factor (acute): 10

Comment on component parts:

All chemical substances in this material are included on or exempted from listing on the IECSC Inventory.
Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description on first aid measures:

General information:

Take off contaminated clothing and wash before reuse.

Inhalation:

Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact:

In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.
Do not pull solidified product from skin forcibly.

Eye contact:

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.
Do not open bonded eyelids forcibly and without any special care.

Ingestion:

Get medical advice.
Do not induce vomiting.
Do not give anything to drink.
The product will polymerise immediately in the mouth, making it almost impossible to swallow, but beware of

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possible choking hazard. Ensure breathing passages are not obstructed. Saliva will separate the solidified product from the mouth over a period of hours.
Do not try to pull the polymerised adhesive from the mouth. Keep checking the mouth to ensure that the person doesn't swallow it when it detaches.

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

Cyanoacrylates give off heat on solidification. Gross contamination with the adhesive may generate enough heat to cause a burn. Burns should be treated normally after the polymer has been removed gently from the skin. If the person experiences a burning sensation flood the contaminated skin immediately with plenty of cold water to cool the burn. continue to remove the adhesive by gently peeling or rolling it from the skin whilst soaking the contaminated area in cold water. It will take longer to remove the adhesive with cold water but it will still be effective.
Accidental bonding of clothing with cyanoacrylate adhesive on the human skin:
If the cyanoacrylate adhesive has been splashed on the clothing and has soaked through to the skin the clothing should never be forcibly removed from the skin. If the clothing has bonded directly on the skin and the person isn't experiencing a burning sensation the affected area should be soaked with warm soapy water and the clothing removed gently by peeling or rolling back. Cold water should be used in cases where there is any burning sensation. Forcible removal of bonded clothing from the skin could lead to mechanical damage occurring to the skin and this could result in a more severe injury.

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

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media:

Carbon dioxide.
Water spray jet.
Sand.
Dry powder.

Extinguishing media that must not be used:

Full water jet.

5.2 Special hazards arising from the substance or mixture:

Carbon monoxide (CO).
Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters:

Do not inhale explosion and/or combustion gases.
Use self-contained breathing apparatus.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Cool containers at risk with water spray jet.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	Ensure adequate ventilation. Keep away from all sources of ignition. Forms slippery surfaces with water. Use breathing apparatus if exposed to vapours/dust/aerosol.
6.2 Environmental precautions:	Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains/surface waters/groundwater.
6.3 Methods and material for containment and cleaning up	Pick up with absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth). Dispose of absorbed material in accordance within the regulations.
6.4 Reference to other sections:	See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling:	Use only in well-ventilated areas. Avoid spilling or spraying in enclosed areas. Highly volatile, flammable components are liberated in processing. Keep away from all sources of ignition - Refrain from smoking. Do not eat, drink or smoke when using this product. After worktime and before work breaks the affected skin areas must be thoroughly cleaned. Use barrier skin cream. Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash before reuse.
7.2 Conditions for safe storage, including any incompatibilities:	Only use containers that are approved specifically for the substance/product. Provide solvent-resistant and impermeable floor. Do not store together with oxidizing agents. Protect from heat/overheating. Keep container in a well-ventilated place. Keep container tightly closed.
7.3 Specific end use(s):	See product use, SECTION 1.2

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with occupational exposure limits to be monitored (GB)

Substance
Ethyl-2-cyanoacrylate
CAS: 7085-85-0, EINECS/ELINCS: 230-391-5, EU-INDEX: 607-236-00-9, Reg-No.: 01-2119527766-29-XXXX
Short-term exposure (15-minute): 0,3 ppm, 1,5 mg/m ³
1,4-Dihydroxybenzene
CAS: 123-31-9, EINECS/ELINCS: 204-617-8, EU-INDEX: 604-005-00-4
Long-term exposure: 0,5 mg/m ³

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DNEL	
Substance	
Ethyl-2-cyanoacrylate, CAS: 7085-85-0	
Industrial, inhalative, Acute - systemic effects, 9,25 mg/m ³	
Industrial, inhalative, Acute - local effects, 9,25 mg/m ³	
Industrial, inhalative, Long-term - systemic effects, 9,25 mg/m ³	
Industrial, inhalative, Long-term - local effects, 9,25 mg/m ³	
general population, inhalative, Acute - local effects, 9,25 mg/m ³	
general population, inhalative, Acute - systemic effects, 9,25 mg/m ³	
general population, inhalative, Long-term - systemic effects, 9,25 mg/m ³	
general population, inhalative, Long-term - local effects, 9,25 mg/m ³	

8.2 Exposure controls

Additional advice on system design:	Ensure adequate ventilation on workstation.
Eye protection:	Safety glasses. (EN 166:2001)
Hand protection:	The details concerned are recommendations. Please contact the glove supplier for further information. In full contact: > 0,4 mm/ Butyl rubber, >240 min (EN 374-1/-2/-3). In splash contact: > 0,4 mm/ Nitrile rubber, >120 min (EN 374-1/-2/-3).
Skin protection:	Light protective clothing.
Other:	Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier. Do not inhale gases/vapours/aerosols. Avoid contact with eyes and skin.
Respiratory protection:	Respiratory protection mask in the event of high concentrations. Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards:	No information available.
Delimitation and monitoring of the environmental exposition:	Not determined.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	pungent
Odour threshold:	No information available.
pH-value:	not applicable
pH-value [1%]:	not applicable
Boiling point [°C]:	150
Flash point [°C]:	87
Flammability (solid, gas) [°C]:	No information available.

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Lower explosion limit:	No information available.
Upper explosion limit:	No information available.
Oxidising properties:	no
Vapour pressure/gas pressure [kPa]:	No information available.
Density [g/cm³]:	1,05
Relative density:	not determined
Bulk density [kg/m³]:	not applicable
Solubility in water:	insoluble
	reacts with water
Solubility other solvents:	No information available.
Partition coefficient [n-octanol/water]:	No information available.
Kinematic viscosity:	not applicable
Relative vapour density:	No information available.
Evaporation speed:	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature:	500
Decomposition temperature [°C]:	No information available.
Particle characteristics:	No information available.
9.2 Other information:	none

SECTION 10: Stability and reactivity

10.1 Reactivity:	See SECTION 10.3.
10.2 Chemical stability:	Stable under normal ambient conditions (ambient temperature).
10.3 Possibility of hazardous reactions:	Reactions with strong oxidizing agents. Reactions with water. Reactions with amines. Reactions with alcohols. Reactions with alkalies (lyes).
10.4 Conditions to avoid:	Strong heating.
10.5 Incompatible materials:	See SECTION 7.
10.6 Hazardous decomposition products:	Irritant gases/vapours.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

Product

ATE-mix, oral, > 5000 mg/kg

Substance

1,4-Dihydroxybenzene, CAS: 123-31-9

LD50, oral, Rat, 375 mg/kg

Ethyl-2-cyanoacrylate, CAS: 7085-85-0

LD50, oral, Rat, > 5000 mg/kg (OECD 401)

Acute dermal toxicity

Product

ATE-mix, dermal, > 2000 mg/kg

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Substance

1,4-Dihydroxybenzene, CAS: 123-31-9

LD50, dermal, Rabbit, 2000 mg/kg

Ethyl-2-cyanoacrylate, CAS: 7085-85-0

LD50, dermal, Rabbit, > 2000 mg/kg (OECD 402)

Acute inhalational toxicity

Serious eye damage/irritation:

Toxicological data of complete product are not available.
Irritant
Calculation method

Skin corrosion/irritation:

Toxicological data of complete product are not available.
Irritant
Calculation method

Respiratory or skin sensitisation:

Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — single exposure:

Toxicological data of complete product are not available.
May cause respiratory irritation.
Calculation method

Specific target organ toxicity — repeated exposure:

Based on the available information, the classification criteria are not fulfilled.

Mutagenicity:

Based on the available information, the classification criteria are not fulfilled.
Does not contain a relevant substance that meets the classification criteria.

Reproduction toxicity:

Based on the available information, the classification criteria are not fulfilled.
Does not contain a relevant substance that meets the classification criteria.

Carcinogenicity:

Based on the available information, the classification criteria are not fulfilled.
Does not contain a relevant substance that meets the classification criteria.

Aspiration hazard:

Based on the available information, the classification criteria are not fulfilled.

General remarks:

Cyanoacrylates bond skin and eyelids in seconds. In the case of large spills on the skin, superficial burns may occur - treat accordingly. There may be irritation and redness at the site of contact.
Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists.

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SECTION 12: Ecological information

12.1 Toxicity:	
Substance	
1,4-Dihydroxybenzene, CAS: 123-31-9	
LC50, (96h), fish, 638 µg/L	
EC50, (72h), Algae, 33 - 330 µg/L	
EC50, (48h), Invertebrates, 61 - 134 µg/L	
12.2 Persistence and degradability	
Behaviour in environment compartments:	not determined
Behaviour in sewage plant:	not applicable
Biological degradability:	not applicable
12.3 Bioaccumulative potential:	No evidence for bioaccumulation potential.
12.4 Mobility in soil:	Cured product is immobile.
12.5 Results of PBT and vPvB assessment:	Based on all available information not to be classified as PBT or vPvB respectively.
12.6 Endocrine disrupting properties:	No information available.
12.7 Other adverse effects:	Ecological data of complete product are not available. Do not discharge product unmonitored into the environment. Do not allow product to reach the drainage.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:	Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.
Product:	Dispose of as hazardous waste.
Waste no. (recommended):	080409*
Contaminated packaging:	Uncontaminated packaging may be taken for recycling. Packaging that cannot be cleaned should be disposed of as for product.
Waste no. (recommended):	150110* packaging containing residues of or contaminated by hazardous substances


SECTION 14: Transport information

14.1 UN number or ID number	
Transport by land according to ADR/RID:	not applicable
Inland navigation (ADN):	not applicable

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Marine transport in accordance with IMDG:	not applicable
Air transport in accordance with IATA:	3334
14.2 UN proper shipping name	
Transport by land according to ADR/RID:	NO DANGEROUS GOODS
Inland navigation (ADN):	NO DANGEROUS GOODS
Marine transport in accordance with IMDG:	NOT CLASSIFIED AS "DANGEROUS GOODS"
Air transport in accordance with IATA:	Aviation regulated liquid, n.o.s. (Cyanoacrylates)[only for more than 0,5l]
	
14.3 Transport hazard class(es)	
Transport by land according to ADR/RID:	not applicable
Inland navigation (ADN):	not applicable
Marine transport in accordance with IMDG:	not applicable
Air transport in accordance with IATA:	9
14.4 Packing group	
Transport by land according to ADR/RID:	not applicable
Inland navigation (ADN):	not applicable
Marine transport in accordance with IMDG:	not applicable
Air transport in accordance with IATA:	III
14.5 Environmental hazards:	
Transport by land according to ADR/RID:	no
Inland navigation (ADN):	no
Marine transport in accordance with IMDG:	no
Air transport in accordance with IATA:	no
14.6 Special precautions for user:	Relevant information under SECTION 6 to 8.
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	
EEC-REGULATIONS:	2008/98/EC 2000/532/EC; 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
RANSPORT-REGULATIONS:	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2021)

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NATIONAL REGULATIONS (GB):

EH40/2005 Workplace exposure limits (Second edition, published December 2011).

- Observe employment restrictions for people:

Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.

- VOC (2010/75/CE)

0%

15.2 Chemical safety assessment:

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

SECTION 16: Other information

16.1 Hazard statements (SECTION 3):

H400	Very toxic to aquatic life.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H302	Harmful if swallowed.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

16.2 Abbreviations and acronyms:

ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route
RID	Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN	Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE	acute toxicity estimate
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DMEL	Derived Minimum Effect Level
DNEL	Derived No Effect Level
EC50	Median effective concentration
ECB	European Chemicals Bureau
EEC	European Economic Community
EINECS	European Inventory of Existing Commercial Chemical Substances
EL50	Median effective loading
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedules
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IATA	International Air Transport Association
IBC-Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50	Inhibition concentration, 50%
IMDG	International Maritime Code for Dangerous Goods
IUCLID	International Uniform Chemical Information Database
IVIS	In vitro irritation score
LC50	Lethal concentration, 50%
LD50	Median lethal dose
LC0	lethal concentration, 0%
LOAEL	lowest-observed-adverse-effect level

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LL50	Median lethal loading
LQ	Limited Quantities
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic substance
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
STP	Sewage Treatment Plant
TLV®/TWA	Threshold limit value – time-weighted average
TLV®STEL	Threshold limit value – short-time exposure limit
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

16.3 Other information

Customs Tariff: not determined

Classification procedure: Eye Irrit. 2: H319 Causes serious eye irritation.
(Calculation method)
Skin Irrit. 2: H315 Causes skin irritation.
(Calculation method)
STOT SE 3: H335 May cause respiratory irritation.
(Calculation method)

Modified position: None.