ivoclar

Safety Data Sheet
in accordance with HSNO

Date of issue: 04.03.2026 *Version number 3* *Revision: 04.03.2026*

1 Identification of the substance or mixture and of the supplier

· **Other means of identification**

· **Trade name:** **Adhese 2**

· **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Dual-curing single-component dental adhesive

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Ivoclar Vivadent AG
Bendererstrasse 2
9494 Schaan
PRINCIPALITY OF LIECHTENSTEIN
Tel: +423 235 35 35 / Fax: +423 235 33 60

Importer:
Ivoclar Vivadent Ltd.
12 Omega St, Rosedale, Auckland
New Zealand
Tel: + 64 9 914 9999 / Fax: + 64 9 914 9990

· **Further information obtainable from:**
Regulatory Affairs
sds@ivoclar.com
· **Emergency telephone number:** 0800 764 766 (National Poison Centre - 24 hours / 7 days)

2 Hazards identification

· **Classification of the substance or mixture**

Flammable liquids Category 3	H226 Flammable liquid and vapour.
Skin irritation Category 2	H315 Causes skin irritation.
Serious eye damage Category 1	H318 Causes serious eye damage.
Skin sensitisation Category 1	H317 May cause an allergic skin reaction.
Reproductive toxicity Category 1	H360 May damage fertility or the unborn child.
Hazardous to the aquatic environment acute Category 1	H400 Very toxic to aquatic life.
Hazardous to the aquatic environment chronic Category 2	H411 Toxic to aquatic life with long lasting effects.

· **Label elements**
· **GHS label elements**
The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS02 GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
2-hydroxyethyl methacrylate
potassium hydroxide
ethyl p-dimethylaminobenzoate

(Contd. on page 2)

Safety Data Sheet
in accordance with HSNO

Date of issue: 04.03.2026 *Version number 3* *Revision: 04.03.2026*

Trade name: Adhese 2

(Contd. of page 1)

TCD-dimethanol-di-IEMA-Addukt
methacrylated phosphoric acid ester
1,10-decandiol dimethacrylate
2-dimethylaminoethyl methacrylate

· **Hazard statements**
Flammable liquid and vapour.
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

· **Precautionary statements**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** *Not applicable*
· **vPvB:** *Not applicable*

3 Composition/Information on ingredients

· **Chemical characterisation: Mixtures**
· **Description:** *Mixture of substances listed below with nonhazardous additions.*

· **Dangerous components:**

CAS: 868-77-9 *EINECS: 212-782-2*	*2-hydroxyethyl methacrylate* *Skin irritation Category 2, H315; Eye irritation Category 2, H319; Skin sensitisation Category 1, H317*	*10-25%*
CAS: 106981-29-7	*TCD-dimethanol-di-IEMA-Addukt* *Eye irritation Category 2, H319; Skin sensitisation Category 1, H317; Hazardous to the aquatic environment chronic Category 3, H412*	*10-25%*
CAS: 85590-00-7	*methacrylated phosphoric acid ester* *Skin irritation Category 2, H315; Eye irritation Category 2, H319; Skin sensitisation Category 1, H317*	*10-25%*
CAS: 64-17-5 *EINECS: 200-578-6*	*ethanol* *Flammable liquids Category 2, H225; Eye irritation Category 2, H319*	*10-25%*
CAS: 6701-13-9 *EINECS: 229-745-1*	*1,10-decandiol dimethacrylate* *Eye irritation Category 2, H319; Skin sensitisation Category 1, H317*	*2.5-10%*
CAS: 2573867-65-7	*methacrylatet polyacrylic acid* *Eye irritation Category 2, H319*	*2.5-10%*
CAS: 6701-13-9 *EINECS: 229-745-1*	*1,10-decandiol dimethacrylate* *Hazardous to the aquatic environment acute Category 1, H400; Hazardous to the aquatic environment chronic Category 1, H410; Skin sensitisation Category 1, H317*	*2.5-10%*

(Contd. on page 3)

Safety Data Sheet
in accordance with HSNO

Date of issue: 04.03.2026 *Version number 3* *Revision: 04.03.2026*

Trade name: Adhese 2

(Contd. of page 2)

CAS: 1310-58-3 EINECS: 215-181-3	potassium hydroxide Skin corrosion Category 1A, H314; Acute oral toxicity Category 4, H302	2.5-10%
CAS: 10373-78-1	camphorquinone Skin irritation Category 2, H315; Eye irritation Category 2, H319; Specific target organ toxicity - single exposure Category 3, H335	<2.5%
CAS: 2867-47-2 EINECS: 220-688-8	2-dimethylaminoethyl methacrylate Skin corrosion Category 1B, H314; Serious eye damage Category 1, H318; Acute oral toxicity Category 4, H302; Acute dermal toxicity Category 4, H312; Skin sensitisation Category 1, H317	<2.5%
CAS: 10287-53-3 EINECS: 233-634-3	ethyl p-dimethylaminobenzoate Reproductive toxicity Category 1, H360; Hazardous to the aquatic environment chronic Category 2, H411	<2.5%
CAS: 128-37-0 EINECS: 204-881-4	Butylated hydroxytoluene Hazardous to the aquatic environment chronic Category 1, H410	<2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:** Rinse out mouth and then drink plenty of water.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire fighting measures

· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **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.

(Contd. on page 4)

Safety Data Sheet
in accordance with HSNO

Date of issue: 04.03.2026 *Version number 3* *Revision: 04.03.2026*

Trade name: Adhese 2

(Contd. of page 3)

7 Handling and storage

· **Handling:**
· **Precautions for safe handling** Only adequately trained personnel should handle this product.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
· **Information about storage in one common storage facility:** Not required
· **Further information about storage conditions:**
Protect from exposure to the light.
Keep container tightly sealed.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Appropriate engineering controls** No further data; see section 7.

· **Ingredients with limit values that require monitoring at the workplace:**	
CAS: 64-17-5 ethanol	
WES	Long-term value: 1880 mg/m³, 1000 ppm oto
CAS: 1310-58-3 potassium hydroxide	
WES	Ceiling limit: 2 mg/m³
CAS: 128-37-0 Butylated hydroxytoluene	
WES	Long-term value: 10 mg/m³ dsen

· **Regulatory information** WES: Workplace Exposure Standards and Biological Exposure Indices
· **Additional information:** The lists valid during the making were used as basis.
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Usual hygienic measures for dental practice and dental laboratories.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· **Protection of hands:**



Protective gloves (EN 374)

After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **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.
· **Not suitable are gloves made of the following materials:**
Commercial medical gloves do not provide protection against the sensitizing effect of methacrylates.

(Contd. on page 5)

Safety Data Sheet
in accordance with HSNO

Date of issue: 04.03.2026 Version number 3 Revision: 04.03.2026

Trade name: Adhese 2

(Contd. of page 4)

· **Eye protection:**



Tightly sealed goggles (EN 166)

9 Physical and chemical properties

· **General Information**	
· **Appearance:**	
· **Form:**	Fluid
· **Colour:**	Yellow
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined
· **pH-value at 20 °C:**	7
· **Change in condition**	
· **Melting point/freezing point:**	Undetermined
· **Initial boiling point and boiling range:**	Undetermined
· **Flash point:**	33.5 °C
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
· **Lower:**	3.5 Vol %
· **Upper:**	15 Vol %
· **Vapour pressure at 20 °C:**	59 hPa
· **Density:**	Not determined
· **Relative density**	Not determined
· **Vapour density**	Not determined
· **Evaporation rate**	Not determined
· **Solubility in / Miscibility with**	
· **water:**	Fully miscible.
· **Partition coefficient: n-octanol/water:**	Not determined
· **Viscosity:**	
· **Dynamic:**	Not determined
· **Kinematic:**	Not determined
· **Solvent content:**	
· **Organic solvents:**	10.4 %
· **Water:**	10.1 %
· **Other information**	No further relevant information available.
· **Particle characteristics**	Not applicable
· **Physical state**	Liquid

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability** Stable under normal handling and storage conditions.
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid**
Protect from exposure to the light.
Keep away from heat and direct sunlight.
· **Incompatible materials:** No further relevant information available.

(Contd. on page 6)

Safety Data Sheet
in accordance with HSNO

Date of issue: 04.03.2026 Version number 3 Revision: 04.03.2026

Trade name: Adhese 2

(Contd. of page 5)

· **Hazardous decomposition products:** None under normal conditions of storage and use.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
CAS: 1310-58-3 potassium hydroxide		
Oral	LD50	273 mg/kg (rat)

· **Specific symptoms in biological assay:**
· **Skin corrosion/irritation**
Causes skin irritation.
· **Serious eye damage/irritation**
Causes serious eye damage.
· **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
· **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**
May damage fertility or the unborn child.
· **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** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable
· **vPvB:** Not applicable
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 7)

Safety Data Sheet
in accordance with HSNO

Date of issue: 04.03.2026 Version number 3 Revision: 04.03.2026

Trade name: Adhese 2

(Contd. of page 6)

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14 Transport information

· **UN-Number**	
· **NZS/RID/ADN, IMDG, IATA**	UN2920
· **UN proper shipping name**	
· **NZS/RID/ADN**	2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (POTASSIUM HYDROXIDE, ETHANOL (ETHYL ALCOHOL)), ENVIRONMENTALLY HAZARDOUS
· **IMDG**	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (POTASSIUM HYDROXIDE, ETHANOL (ETHYL ALCOHOL)), MARINE POLLUTANT
· **IATA**	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (POTASSIUM HYDROXIDE, ETHANOL)
· **Transport hazard class(es)**	
· **NZS/RID/ADN**	
· **Class**	8 (CF1) Corrosive substances.
· **Label**	8+3
· **IMDG**	
· **Class**	8 Corrosive substances.
· **Label**	8/3
· **IATA**	
· **Class**	8 Corrosive substances.
· **Label**	8 (3)
· **Packing group**	
· **NZS/RID/ADN, IMDG, IATA**	II
· **Environmental hazards:**	Product contains environmentally hazardous substances: ethyl p-dimethylaminobenzoate
· **Marine pollutant:**	No Symbol (fish and tree)
· **Special marking (NZS/RID/ADN):**	Symbol (fish and tree)
· **Special precautions for user**	Warning: Corrosive substances.
· **Hazard identification number (Kemler code):**	83
· **Hazchem or Emergency Action Code:**	•3W
· **EMS Number:**	F-E,S-C
· **Segregation groups**	(SGG1) Acids
· **Stowage Category**	C

(Contd. on page 8)

Safety Data Sheet
in accordance with HSNO

Date of issue: 04.03.2026 Version number 3 Revision: 04.03.2026

Trade name: Adhese 2

(Contd. of page 7)

· **Stowage Code**	SW1 Protected from sources of heat. SW2 Clear of living quarters.
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable
· **Transport/Additional information:**	
· **NZS/RID/ADN**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (POTASSIUM HYDROXIDE, ETHANOL (ETHYL ALCOHOL)), 8 (3), II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

· **New Zealand Inventory of Chemicals**

All ingredients are listed.

· **GHS label elements**
The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS02 GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
2-hydroxyethyl methacrylate
potassium hydroxide
ethyl p-dimethylaminobenzoate
TCD-dimethanol-di-IEMA-Addukt
methacrylated phosphoric acid ester
1,10-decandiol dimethacrylate
2-dimethylaminoethyl methacrylate

· **Hazard statements**
Flammable liquid and vapour.
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.

(Contd. on page 9)

Safety Data Sheet
in accordance with HSNO

Date of issue: 04.03.2026 Version number 3 Revision: 04.03.2026

Trade name: Adhese 2

(Contd. of page 8)

May damage fertility or the unborn child.
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

· **Precautionary statements**
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is 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

· **National regulations:**
· **Other regulations, limitations and prohibitive regulations**
The product is a medical device according to Regulation 2017/745 on Medical Devices (MDR).
· **Approval code** NA
· **Group standard** NA
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H360 May damage fertility or the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
· **Contact:**
· **Abbreviations and acronyms:**
IMO: International Maritime Organization
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)

(Contd. on page 10)

Safety Data Sheet
in accordance with HSNO

Date of issue: 04.03.2026 *Version number 3* *Revision: 04.03.2026*

Trade name: Adhese 2

(Contd. of page 9)

LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flammable liquids Category 2: Flammable liquids – Category 2
Flammable liquids Category 3: Flammable liquids – Category 3
Acute oral toxicity Category 4: Acute toxicity – Category 4
Skin corrosion Category 1A: Skin corrosion/irritation – Category 1A
Skin corrosion Category 1B: Skin corrosion/irritation – Category 1B
Skin irritation Category 2: Skin corrosion/irritation – Category 2
Serious eye damage Category 1: Serious eye damage/eye irritation – Category 1
Eye irritation Category 2: Serious eye damage/eye irritation – Category 2
Skin sensitisation Category 1: Skin sensitisation – Category 1
Reproductive toxicity Category 1: Reproductive toxicity – Category 1
Specific target organ toxicity - single exposure Category 3: Specific target organ toxicity (single exposure) – Category 3
Hazardous to the aquatic environment acute Category 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Hazardous to the aquatic environment chronic Category 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Hazardous to the aquatic environment chronic Category 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Hazardous to the aquatic environment chronic Category 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **** Data compared to the previous version altered.***