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

1.1. Product identifier

Product form:	Mixture
Product name:	Ceramic Texture Marker
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:	SILADENT Dr. Böhme & Schöps GmbH
Street / mailbox:	Im Klei 26
Country code. / postal code / city:	DE - 38644 Goslar
Phone:	+49 (0) 53 21 / 37 79 - 0
Fax:	+49 (0) 53 21 / 38 96 32
E-mail / Website:	info@siladent.de / www.siladent.de
Further information obtainable from:	SILADENT Dr. Böhme & Schöps GmbH

1.4 Emergency telephone number

SILADENT Dr. Böhme & Schöps GmbH:	+49 (0) 53 21 / 37 79 - 0 (Mon-Fri. 8 a.m. - 4 p.m.)

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 (EC no) 200-578-6 (REACH no) 01-2119457610-43-xxxx	Ethanol Flam. Liq. 2, H225 Eye Irrit. 2, H319 (C ≥ 50 %) Eye Irrit. 2, H319	65 - 85 %
(CAS no) 112945-52-5 (EC no) 231-545-4 (REACH no) 01-2119379499-16-xxxx	Amorphous silica Not classified	10 - 20 %
(CAS no) 1344-28-1 (EC no) 215-691-6 (REACH no) 01-2119529248-35-xxxx	Aluminium oxide Not classified	10 - 20 %
(CAS no) 13463-67-7 (EC no) 236-675-5	Titanium dioxide Not classified	1 - 5 %
(CAS no) 7440-50-8 (EC no) 231-159-6	Copper Acute Tox. 4, H302 Aquatic Acute 1, H400 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) 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) 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) 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) 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:	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
Based on available data, the classification criteria are not met

Carcinogenicity: Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure):	Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure):	Not classified Based on available data, the classification criteria are not met
Aspiration hazard:	Not classified 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

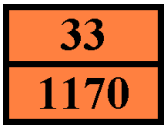
Packing group (ADR):	II
Packing group (IMDG):	II
Packing group (IATA):	II

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