Printing date 06.02.2025

Version: 18 (replaces version 17)

Revision: 06.02.2025

SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1 Product identifier Trade name: <u>ZINKSILICAAT ZL 400-55 BINDER</u> · Article number: C31BINDER · UFI: DCD0-N0NC-500Q-X4AS 1.2 Relevant identified uses of the substance or mixture and uses advised against Sector of Use SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites SU19 Building and construction work SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen) · Product category PC9a Coatings and paints, thinners, paint removers Process category PROC7 Industrial spraying PROC10 Roller application or brushing PROC19 Manual activities involving hand contact PROC13 Treatment of articles by dipping and pouring · Application of the substance / the mixture solvent based, two component ethyl silicate binder 1.3 Details of the supplier of the safety data sheet · Manufacturer/Supplier: Zandleven Coatings B.V. Snekertrekweg 57-59, 8912 AA Leeuwarden, Netherlands Tel: +31 58 2129545 Fax: +31 58 2155996 E-mail: info@zandleven.com Internet: www.zandleven.com · Further information obtainable from: R&D department: sds@zandleven.com · 1.4 Emergency telephone number: Nationaal Vergiftigingen Informatie +31 (0)88 755 8000 ORFILA (INRS) : + 33 (0)1 45 42 59 59 Centres Antipoison et de Toxicovigilance ANGERS: 02 41 48 21 21 BORDEAUX: 05 56 96 40 80 LILLE: 0800 59 59 59 LYON: 04 72 11 69 11 MARSEILLE: 04 91 75 25 25 NANCY: 03 83 22 50 50 PARIS: 01 40 05 48 48 STRASBOURG: 03 88 37 37 37 TOULOUSE: 05 61 77 74 47 Giftnotruf der Charité, Berlin: 030/19240 Giftinformationszentrum-Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein (GIZ-Nord) :0551/19 240 Informationszentrale gegen Vergiftungen Zentrum für Kinderheilkunde Universitätsklinikum Bonn: 0228/19240 Giftnotruf Erfurt Gemeinsames Giftinformationszentrum der Länder Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt und Thüringen: 0361/730 730 Informations- und Beratungszentrum für Vergiftungsfälle Klinik für Kinder- und Jugendmedizin Universitätsklinikum des Saarlandes: 06841/19240 Giftinformationszentrum der Länder Rheinland-Pfalz und Hessen - Klinische Toxikologie - Universitätsmedizin der Johannes Gutenberg-Universität Mainz: 06131/19240 Vergiftungs-Informations-Zentrale Zentrum für Kinder- und Jugendmedizin Universitätsklinikum: 0761/19240 Giftnotruf München Toxikologische Abteilung der II. Med. Klinik und Poliklinik: 089/19240 Supplier +31 (0)58 2677590 (during office hours)

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

 $^{\rm \cdot}$ Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

(Contd. on page 2)

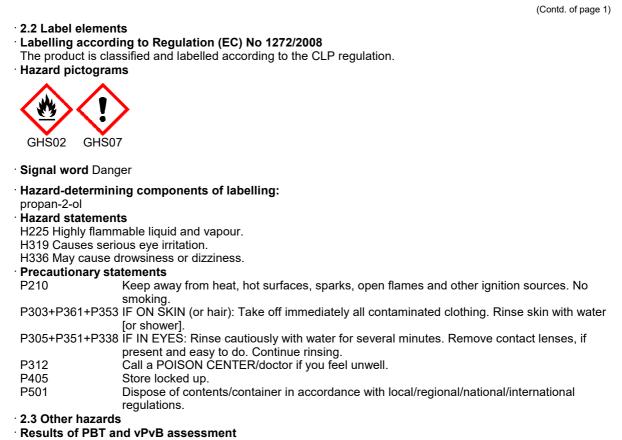
Printing date 06.02.2025

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31 Version: 18 (replaces version 17)

Revision: 06.02.2025

Trade name: ZINKSILICAAT ZL 400-55 BINDER



- · **PBT:** Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

Percentages of the components are expressed as a percentage by weight

CAS: 67-63-0	propan-2-ol	25-50%
EINECS: 200-661-7	🚸 Flam. Liq. 2, H225; 🚸 Eye Irrit. 2, H319; STOT SE 3, H336	
Index number: 603-117-00-0		
Reg.nr.: 01-2119457558-25		
CAS: 78-10-4	tetraethyl silicate	2.5-10%
EINECS: 201-083-8	🚸 Flam. Lig. 3, H226; 🕔 Acute Tox. 4, H332; Eye Irrit. 2, H319;	
Index number: 014-005-00-0	STOT SE 3, H335	
Reg.nr.: 01-2119496195-28		
 Additional information: For	the wording of the listed bazard phrases refer to section 16	

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

SECTION 4: First aid measures

· 4.1 Description of first aid measures

- · General information: Immediately remove any clothing soiled by the product.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Immediately rinse with water.
- · After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

• After swallowing: If symptoms persist consult doctor.

Printing date 06.02.2025

Version: 18 (replaces version 17)

Revision: 06.02.2025

Trade name: ZINKSILICAAT ZL 400-55 BINDER

(Contd. of page 2)

- 4.2 Most important symptoms and effects, both acute and delayed
- No further relevant information available.
- $^{\rm \cdot}$ 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:
- CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
- · Protective equipment: No special measures required.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

- Wear protective equipment. Keep unprotected persons away.
- · 6.2 Environmental precautions:
- Dilute with plenty of water.
- Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

- Ensure adequate ventilation.
- 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

Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

- Protect against electrostatic charges.
- 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles:

Store in a cool location.

Store material in original, well-closed packages in a cool, well-ventilated area according to local regulations.

- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:
- Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

- · Recommended storage temperature: 5 30 °C
- · 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:

78-10-4 tetraethyl silicate

IOELV Long-term value: 44 mg/m³, 5 ppm

(Contd. on page 4)

EU

Printing date 06.02.2025

Version: 18 (replaces version 17)

Revision: 06.02.2025

Trade name: ZINKSILICAAT ZL 400-55 BINDER

			(Contd. of page
	rived No Effect Level) for workers:		
67-63-0 pi	opan-2-ol Long-term - systemic effects, worker		
Dermal	o	00	3 ()
Innalative	Acute - systemic effects, worker	1,000 mg/n	. ,
	Long-term - systemic effects, worker	-	
•	rived No Effect Level) for the gener	al polulatio	n:
-	opan-2-ol		
Oral	Acute - systemic effects, general pop		51 mg/kg bw/day (human)
	Long-term - systemic effects, general		
Dermal	Long-term - systemic effects, general		
Inhalative	Acute - systemic effects, general pop		178 mg/m³ (human)
	Long-term - systemic effects, general		,
Additiona	I information: The lists valid during the	າe making w	ere used as basis.
vapour or Appropria Individual General p Provide re Keep away Immediate Wash han Avoid cont Avoid cont Respirato In case of use self-cc Respirators the safe w workers ar respirators respirator	dust concentrations below any lower entering controls No further of protection measures, such as person rotective and hygienic measures: adily accessible eye wash stations any from foodstuffs, beverages and feed by remove all soiled and contaminated ds before breaks and at the end of work act with the eyes. The exposure or low pollution use resonationed respiratory protective device. The selection must be based on known of orking limits of the selected respiratory exposed to concentrations above the subse and properly fitted, air-purifying or complying with an approved standard composite type of filter A1	explosive lim data; see sec sonal protect d safety sho l. d clothing ork. spiratory filte r anticipated f a risk ass	ctive equipment owers. er device. In case of intensive or longer exposure I exposure levels, the hazards of the product and limit, they must use appropriate, certified
Chemical	Protective gloves resistant gloves (EN 374)		
The glove Selection of degradation Material of	of the glove material on consideration on f gloves	esistant to t of the pene	ndition. he product/ the substance/ the preparation. tration times, rates of diffusion and the n the material, but also on further marks of quality
and varies resistance application	from manufacturer to manufacturer. A of the glove material can not be calcu n. bon rubber (Viton)	As the produ	ict is a preparation of several substances, the vance and has therefore to be checked prior to the

 Penetration time of glove material KCL Camatril 730 / Best Nitri-solve 730 breakthrough time > 480 min. thickness: 0,4 / 0,38 mm

(Contd. on page 5)

Printing date 06.02.2025

Version: 18 (replaces version 17)

Revision: 06.02.2025

Trade name: ZINKSILICAAT ZL 400-55 BINDER

(Contd. of page 4) The exact break trough 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: Disposables

• Eye/face protection



Tightly sealed goggles

Safety glasses according to EN 166 or equivalent

Body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved before the product is used by a specialist.

If there is a risk of ignition by static electricity, anti-static protective clothing should be worn. For the best protection against static discharge, clothing should consist of anti-static overalls, boots and gloves. For further information on materials and design requirements and test methods consult the European standard EN 1149.

· Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties 9.1 Information on basic physical and chemical properties · General Information · Physical state Liauid · Colour: According to product specification · Odour: Characteristic · Odour threshold: Not determined. · Melting point/freezing point: Undetermined. · Boiling point or initial boiling point and boiling 82 °C (67-63-0 propan-2-ol) range · Flammability Highly flammable. Lower and upper explosion limit · Lower: 2 Vol % (67-63-0 propan-2-ol) · Upper: 12 Vol % (67-63-0 propan-2-ol) · Flash point: 13 °C • Auto-ignition temperature: 425 °C (67-63-0 propan-2-ol) · Decomposition temperature: Not determined. · pH Mixture reacts violently with water. · Viscosity: Kinematic viscosity Not determined. · Dynamic at 20 °C: 50 mPas Solubility · water: Fully miscible. · Partition coefficient n-octanol/water (log value) Not determined. Vapour pressure at 20 °C: 43 hPa (67-63-0 propan-2-ol) · Density and/or relative density · Density at 20 °C: 0.93 g/cm³ Relative density Not determined. · Vapour density Not determined. • 9.2 Other information · Appearance: · Form: Fluid · Important information on protection of health and environment, and on safety. Ignition temperature: Product is not selfigniting. (Contd. on page 6) EU

Printing date 06.02.2025

Version: 18 (replaces version 17)

Revision: 06.02.2025

Trade name: ZINKSILICAAT ZL 400-55 BINDER

	(Contd. of page 5
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Solvent content:	
Water:	6.3 %
Change in condition	
Evaporation rate	Not determined.
Information with regard to physical hazard cl	lasses
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Highly flammable liquid and vapour.
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flamma	able
gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

10.2 Chemical stability

- 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** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- · 10.6 Hazardous decomposition products: No dangerous decomposition products known.

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: 	

	67-63-0 pi	67-63-0 propan-2-0l		
	Oral	LD50	5,045 mg/kg (rat)	
	Dermal	LD50	12,800 mg/kg (rabbit)	
	Inhalative	LC50/4 h	30 mg/l (rat)	
ſ	78-10-4 te	traethyl si	ilicate	
	Oral	LD50	6,270 mg/kg (rat)	
	Dermal	LD50	5,878 mg/kg (rabbit)	

Primary irritant effect:

• Skin corrosion/irritation Based on available data, the classification criteria are not met.

· Serious eye damage/irritation Causes serious eye irritation.

- · 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.

(Contd. on page 7)

EU

Printing date 06.02.2025

Version: 18 (replaces version 17)

Revision: 06.02.2025

(Contd. of page 6)

Trade name: ZINKSILICAAT ZL 400-55 BINDER

- · STOT-single exposure May cause drowsiness or dizziness.
- · 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.

· 11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

67-63-0 propan-2-ol

LC50/96 h 4.2-11.1 mg/l (fish)

LC50/48 h 1.4 mg/l (crustaceans)

- 12.2 Persistence and degradability No further relevant information available.
- · 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: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Endocrine disrupting properties
- The product does not contain substances with endocrine disrupting properties.
- 12.7 Other adverse effects
- · Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

•	waste catalogue
08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00 wastes from MFSU and removal of paint and varnish	
08 01 11* waste paint and varnish containing organic solvents or other hazardous substances	
HP3	Flammable
HP4	Irritant - skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

Uncleaned packaging:

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

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information	1	
 14.1 UN number or ID number ADR/RID/ADN, IMDG, IATA 	UN1263	
 14.2 UN proper shipping name ADR/RID/ADN 	1263 PAINT	
		(Contd. on page 8)

Printing date 06.02.2025

Version: 18 (replaces version 17)

Revision: 06.02.2025

Trade name: ZINKSILICAAT ZL 400-55 BINDER

	(Contd. of page 7)
· IMDG, IATA	PAINT
 14.3 Transport hazard class(es) 	
· ADR/RID/ADN, IMDG, IATA	
Class	3 Flammable liquids.
· Label	3
 14.4 Packing group ADR/RID/ADN, IMDG, IATA 	II
 14.5 Environmental hazards: Marine pollutant: 	No
 14.6 Special precautions for user Hazard identification number (Kemler code): EMS Number: Stowage Category 	Warning: Flammable liquids. 33 F-E, <u>S-E</u> B
 14.7 Maritime transport in bulk according to IMC instruments 	D Not applicable.
 Transport/Additional information: 	
 ADR/RID/ADN Limited quantities (LQ) Excepted quantities (EQ) 	5L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
 Transport category Tunnel restriction code 	2 D/E
 IMDG Limited quantities (LQ) Excepted quantities (EQ) 	5L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1263 PAINT, 3, II

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 None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

• DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

(Contd. on page 9)

⁻ EU

Printing date 06.02.2025

Version: 18 (replaces version 17)

Revision: 06.02.2025

(Contd. of page 8)

3

3

FU

Trade name: ZINKSILICAAT ZL 400-55 BINDER

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

7647-01-0 hydrogen chloride

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

7647-01-0 hydrogen chloride

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other inform	
	resent knowledge. However, this shall not constitute a guarantee for any not establish a legally valid contractual relationship.
Classification according to Regu The classification of the mixture is to Regulation (EC) No 1272/2008.	Ilation (EC) No 1272/2008 generally based on the calculation method using substance data according according to the substance data according to the substan
Contact: J. Dijkstra	
Date of previous version: 20.04.2	
Version number of previous vers	sion: 17
Abbreviations and acronyms: RID: Règlement international concernant le tr International Transport of Dangerous Goods I ICAO: International Civil Aviation Organisatio	
	des marchandises dangereuses par route (European Agreement Concerning the International
IATA: International Air Transport Association GHS: Globally Harmonised System of Classif	
EINECS: European Inventory of Existing Con ELINCS: European List of Notified Chemical	
CAS: Chemical Abstracts Service (division of	
DNEL: Derived No-Effect Level (REACH)	
LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulat Flam. Liq. 2: Flammable liquids – Category 2	ive
Flam. Liq. 3: Flammable liquids – Category 3	
Acute Tox. 4: Acute toxicity – Category 4	
Eye Irrit. 2: Serious eye damage/eye irritation STOT SE 3: Specific target organ toxicity (sin	
Sources	
	cy - http://echa.europa.eu/information-on-chemicals