SAFETY DATA SHEET

Colloidal Silica Suspension 50 nm Alkaline

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

1.1. Product Identifier

Trade name

Colloidal Silica Suspension 50 nm Alkaline

Product no.

48161015, 48161017 (1020, 1030, 1035)

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

Relevant identified uses of the substance or mixture

Final polishing of metallographic samples.
Restricted to professional and industrial use.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Akasel A/S
Svogerslev Hovedgade 48
4000 Roskilde
Denmark
+45 57 84 05 01
www.akasel.com

E-mail

safety@akasel.com

▼Revision

15/10/2026

▼SDS Version

6.0

▼Date of previous version

07/07/2026 (5.0)

1.4. Emergency telephone number

Healthcare professionals: Dial 0344 892 0111 to reach The National Poisons Information Service (NPIS) (24 hour service)
General public:
England - Dial 111 to reach NHS 111 (24 hour service)
Scotland - Dial 111 to reach NHS 24 (24 hour service)
Wales - Dial 111 or 0845 4647 to reach NHS Direct (24 hour service)
See section 4 “First aid measures”.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.2. Label elements

Hazard pictogram(s)

Not applicable.

Signal word
Not applicable.

Hazard statement(s)
Not applicable.

Precautionary statement(s)
General
Not applicable.

Prevention
Not applicable.

Response
Not applicable.

Storage
Not applicable.

Disposal
Not applicable.

Hazardous substances
Contains no substances that need to be listed on the label.

Additional labelling

2.3. Other hazards
Additional warnings
This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification. This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable. This product is a mixture.

3.2. ▼Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Silicon dioxide; synthetic amorphous silicon dioxide	CAS No.: 7631-86-9 EC No.: 231-545-4 UK-REACH: Index No.:	40-60%		
Propane-1,2-diol	CAS No.: 57-55-6 EC No.: 200-338-0 UK-REACH: Index No.:	<15%		

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information
-

SECTION 4: First aid measures

4.1. Description of first aid measures
General information
In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

▼Ingestion

If the person is conscious, rinse the mouth with water and stay with the person.
In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Not applicable.

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

None known.

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

Treat symptomatically.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.
If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Carbon oxides (CO / CO2)

5.3. Advice for firefighters

No specific requirements.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas.
Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.
Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 “Disposal considerations” on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material

Always store in containers of the same material as the original container.

Storage conditions

5 - 50°C

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Propane-1,2-diol
Long term exposure limit (8 hours) (ppm): 150(total)
Long term exposure limit (8 hours) (mg/m^3): 474(total)/10(particulates)

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

Propane-1,2-diol

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	213mg/kg bw/dg
Long term – Local effects - General population	Inhalation	10mg/m3
Long term – Local effects - Workers	Inhalation	10mg/m3
Long term – Systemic effects - General population	Inhalation	50mg/m3
Long term – Systemic effects - Workers	Inhalation	168mg/m3
Long term – Systemic effects - General population	Oral	85 mg/m3

PNEC

Propane-1,2-diol

Route of exposure:	Duration of Exposure:	PNEC:
Activated Sludge Plant		2000mg/l
Freshwater		260 mg/l
Freshwater sediment		572 mg/kg d.w
Intermittent release		183mg/l
Marine water		26mg/l
Marine water sediment		57.2mg/kg d.w
Soil		50mg/kg d.w

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations
Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios
There are no exposure scenarios implemented for this product.

Exposure limits
Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures
The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.
Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures
In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure
No specific requirements.

Individual protection measures, such as personal protective equipment

Generally
Use only UKCA marked protective equipment.

Respiratory Equipment

Type	Class	Colour	Standards
Respiratory protection is not needed in the event of adequate ventilation	-	-	-

Skin protection

Recommended	Type/Category	Standards
No specific requirements.	-	-

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0,2	> 240	EN374-2, EN16523-1, EN388	

Eye protection

Work situation	Type	Standards	
At risk of splashing in the eyes	Wear safety glasses with side shields.	EN166	

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state
Liquid

Colour
White

Odour / Odour threshold

None

▼pH
9-10

Density (g/cm^3)
No data available.

Kinematic viscosity
No data available.

Particle characteristics
Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C)
No data available.

Softening point/range (°C)
Does not apply to liquids.

Boiling point (°C)
100

Vapour pressure
1725 mmHg

Relative vapour density
No data available.

Decomposition temperature (°C)
No data available.

Data on fire and explosion hazards

Flash point (°C)
No data available.

Flammability (°C)
No data available.

Auto-ignition temperature (°C)
No data available.

Lower and upper explosion limit (% v/v)
No data available.

Solubility

Solubility in water
Completely soluble

n-octanol/water coefficient (LogKow)
No data available.

Solubility in fat (g/L)
No data available.

9.2. Other information

Other physical and chemical parameters
No data available.

Oxidizing properties
No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
The product is stable under the conditions, noted in section 7 “Handling and storage”.

10.3. Possibility of hazardous reactions
None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/substance	Propane-1,2-diol
Species:	Guinea pig
Route of exposure:	Intraperitoneal
Test:	LD50
Result:	9718 mg/kg

Product/substance	Propane-1,2-diol
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	6423 mg/kg

Product/substance	Propane-1,2-diol
Species:	Rabbit
Route of exposure:	Oral
Test:	LD50
Result:	18500 mg/kg

Product/substance	Propane-1,2-diol
Species:	Rabbit
Route of exposure:	Inhalation
Test:	LC50 (2 hours)
Result:	>317 mg/L

Product/substance	Propane-1,2-diol
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	>2000 mg/kg

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Based on available data, the classification criteria are not met.

Respiratory sensitization

Based on available data, the classification criteria are not met.

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.

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.

Symptoms related to the physical, chemical and toxicological characteristics

None known.

11.2. Information on other hazards

Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

None known.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	Propane-1,2-diol
Species:	Daphnia
Duration:	48 hours
Test:	EC50
Result:	110 mg/L

Product/substance	Propane-1,2-diol
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	710 mg/L

Product/substance	Propane-1,2-diol
Species:	Algae
Duration:	96 hours
Test:	ErC50
Result:	19000 mg/L

Based on available data, the classification criteria are not met.

12.2. ▼Persistence and degradability

Product/substance	Propane-1,2-diol
Result:	81,7 %
Conclusion:	Readily biodegradable
Test:	OECD 301 F

12.3. ▼Bioaccumulative potential

Product/substance	Propane-1,2-diol
BCF:	0.09
LogKow:	-0,7800
Conclusion:	No potential for bioaccumulation

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is not covered by regulations on dangerous waste.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code

Not applicable.

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID ***	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR/ADN/RID	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group
** Environmental hazards
*** UN number or ID number

Additional information

Not dangerous goods according to ADR/ADN/RID, IATA and IMDG.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

Restricted to professional users.

Demands for specific education

No specific requirements.

SEVESO - Categories / dangerous substances

Not applicable.

Additional information

Not applicable.

Sources

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

▼Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EC = Effective concentration
ED = Effective dose
EINECS = European Inventory of Existing Commercial chemical Substances
EL = Effective Loading
ErC = Concentration associated with x% growth rate response
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GWP = Global warming potential
HP = Hazardous Property code
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IC = X maximum inhibitory concentration
IMDG = International Maritime Dangerous Goods
LC = Lethal concentration
LCLo = Value is the lowest concentration of a material in air reported to have caused the death of animals or humans
LD = Lethal dose
LOAEC = Lowest Observed Adverse Effect Concentration
LOAEL = Lowest Observed Adverse Effect Level
LOEC = Lowest Observed Effect Concentration
LogKow = logarithm of the n-octanol/water coefficient
LL = Lethal Loading
M = For multiplication factor
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NOAEC = No Observed Adverse Effect Concentration
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
NOELR = No Observable Effect Loading Rate
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVCB = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

Not applicable.

The safety data sheet is validated by

safety@akasel.com

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: GB-en