

## SAFETY DATA SHEET

# Fumed Silica Suspension 0,2µm, Water free

### SECTION 1: Identification

#### 1.1. Product identifier

##### Trade name

Fumed Silica Suspension 0,2µm, Water free

##### Product no.

48133015, 48133017 (1060, 1070, 1075)

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

##### Relevant identified uses of the substance or mixture

Polishing of metallographic samples

Restricted to professional users.

##### 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

##### SDS date

2/23/2025

##### SDS Version

4.0

##### Date of previous version

11/12/2023 (3.0)

#### 1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (triage.webpoisoncontrol.org) to get specific guidance for your case

See also section 4 "First aid measures".

### SECTION 2: Hazard(s) identification

#### OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

#### 2.1. Classification of the substance or mixture

Acute Tox. 4; H302, Harmful if swallowed.

STOT RE 2; H373, May cause damage to organs through prolonged or repeated exposure.

#### 2.2. Label elements

##### Hazard pictogram(s)



##### Signal word

Warning

##### Hazard statement(s)

Harmful if swallowed. (H302)

May cause damage to organs through prolonged or repeated exposure. (H373)

#### Precautionary statement(s)

##### General

-

##### Prevention

Do not breathe vapour/mist. (P260)

Wash hands and exposed skin thoroughly after handling. (P264)

##### Response

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. (P301+P312)

Get medical advice/attention if you feel unwell. (P314)

Rinse mouth. (P330)

##### Storage

-

##### Disposal

Dispose of contents/container in accordance with local regulation (P501)

#### Additional labelling

Not applicable.

### 2.3. Other hazards

## 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 |
|------------------------------------------------------|----------------------|-------|--------------------|------|
| ethanediol ethylene glycol                           | CAS No.: 107-21-1    | <80%  | Acute Tox. 4, H302 |      |
| Silica, synthetic amorphous, fumed, crystalline-free | CAS No.: 112945-52-5 | <20%  |                    |      |

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

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

#### Other information

The CAS-No. 7631-86-9 is an old CAS-no. and is related to silica in general (silicon dioxide SiO<sub>2</sub>) in all physical forms.

The CAS-No. 112945-52-5 is the new CAS-No. for pyrogenic or fumed synthetic amorphous silica.

## SECTION 4: First-aid measures

### 4.1. ▼ Description of first aid measures

#### General information

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

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.

If skin irritation occurs: Get medical advice/attention.

#### 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 SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
Rinse mouth.

**Burns**

Not applicable.

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

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

**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: Fire-fighting 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 / CO<sub>2</sub>)

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid direct contact with spilled substances.

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**

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

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**

Avoid direct contact with the product.

Avoid contact during pregnancy and while nursing.

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.

### Liquid class

Combustible Liquid / Class IIIB (NFPA 30)

### Storage conditions

Dry, cool and well ventilated

### 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

No substances are listed with a permissible exposure limit (ref: 29 CFR 1910.1000 TABLE Z-1)

### 8.2. ▼ Exposure controls

Apply general control to prevent unnecessary exposure

#### 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

Occupational exposure limits have not been defined for the substances in this product.

#### Appropriate technical measures

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

Keep damming materials near the workplace. If possible, collect spillage during work.

### Individual protection measures, such as personal protective equipment

#### Generally

Use only protective equipment with a recognized certification mark, e.g. the UL mark.

#### Respiratory Equipment

| Type                                                                                  | Class | Colour | Standards |
|---------------------------------------------------------------------------------------|-------|--------|-----------|
|  |       |        |           |

#### Skin protection

| Recommended                                                                                                      | Type/Category | Standards |
|------------------------------------------------------------------------------------------------------------------|---------------|-----------|
| Wear appropriate protection clothing, e.g. coveralls in polypropylene or working clothes in cotton or polyester. | -             | -         |
|                             |               |           |

#### Hand protection

| Material                                                                              | Glove thickness (mm) | Breakthrough time (min.) | Standards               |
|---------------------------------------------------------------------------------------|----------------------|--------------------------|-------------------------|
| Nitrile                                                                               | 0,2                  | > 480                    | EN374-2, EN374-3, 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

#### Color

White

#### Odor

Sweet

#### ▼ Odor threshold (ppm)

No relevant or available data due to the nature of the product.

#### ▼ pH

No relevant or available data due to the nature of the product.

#### ▼ Density (g/cm<sup>3</sup>)

No relevant or available data due to the nature of the product.

#### ▼ Kinematic viscosity

No relevant or available data due to the nature of the product.

#### Particle characteristics

Does not apply to liquids.

#### Phase changes

#### ▼ Melting point/freezing point (°F)

No relevant or available data due to the nature of the product.

#### Softening point/range (°F)

Does not apply to liquids.

#### Boiling point (°F)

-

#### Boiling point (°C)

198

#### ▼ Vapor pressure

No relevant or available data due to the nature of the product.

#### ▼ Relative vapor density

No relevant or available data due to the nature of the product.

#### ▼ Decomposition temperature (°F)

No relevant or available data due to the nature of the product.

#### Data on fire and explosion hazards

#### Flash point (°F)

-

#### Flash point (°C)

111

#### ▼ Flammability (°F)

No relevant or available data due to the nature of the product.

#### ▼ Auto-ignition temperature (°F)

No relevant or available data due to the nature of the product.

#### Explosion limits (% v/v)

1.8 - 12.8

#### Solubility

#### Solubility in water

Completely soluble

#### ▼ n-octanol/water coefficient (LogKow)

No relevant or available data due to the nature of the product.

#### ▼ Solubility in fat (g/L)

No relevant or available data due to the nature of the product.

## 9.2. Other information

### Other physical and chemical parameters

No data available.

### ▼ Oxidizing properties

No relevant or available data due to the nature of the product.

## 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, including those associated with foreseeable emergencies

None known.

### 10.4. Conditions to avoid

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

### 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 toxicological effects

#### Acute toxicity

|                    |                            |
|--------------------|----------------------------|
| Product/substance  | ethanediol ethylene glycol |
| Species:           | Rat                        |
| Route of exposure: | Intravenous                |
| Test:              | LD50                       |
| Result:            | 3260 mg/kg                 |

|                    |                            |
|--------------------|----------------------------|
| Product/substance  | ethanediol ethylene glycol |
| Species:           | Guinea pig                 |
| Route of exposure: | Oral                       |
| Test:              | LD50                       |
| Result:            | 5500 mg/kg                 |

|                    |                            |
|--------------------|----------------------------|
| Product/substance  | ethanediol ethylene glycol |
| Species:           | Guinea pig                 |
| Route of exposure: | Intraperitoneal            |
| Test:              | LD50                       |
| Result:            | 5614 mg/kg                 |

|                    |                                                      |
|--------------------|------------------------------------------------------|
| Product/substance  | Silica, synthetic amorphous, fumed, crystalline-free |
| Species:           | Rabbit                                               |
| Route of exposure: | Oral                                                 |
| Test:              | LD50                                                 |
| Result:            | 5000 mg/kg                                           |

Harmful if swallowed.

#### 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 sensitisation

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

May cause damage to organs through prolonged or repeated exposure.

#### Aspiration hazard

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

#### Long term effects

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

#### Other information

None known.

## SECTION 12: Ecological information

### 12.1. Toxicity

|                   |                            |
|-------------------|----------------------------|
| Product/substance | ethanediol ethylene glycol |
| Species:          | Daphnia                    |
| Duration:         | 48 hours                   |
| Test:             | EC50                       |
| Result:           | 13140 mg/L                 |

|                   |                            |
|-------------------|----------------------------|
| Product/substance | ethanediol ethylene glycol |
| Species:          | Fish                       |
| Duration:         | 96 hours                   |
| Test:             | LC50                       |
| Result:           | 18500 mg/L                 |

|                   |                                                      |
|-------------------|------------------------------------------------------|
| Product/substance | Silica, synthetic amorphous, fumed, crystalline-free |
| Species:          | Daphnia                                              |
| Duration:         | 24 hours                                             |
| Test:             | LC50                                                 |
| Result:           | >10000 mg/L                                          |

|                   |                                                      |
|-------------------|------------------------------------------------------|
| Product/substance | Silica, synthetic amorphous, fumed, crystalline-free |
| Species:          | Fish                                                 |
| Duration:         | 96 hours                                             |
| Test:             | LC50                                                 |
| Result:           | >10000 mg/L                                          |

### 12.2. ▼ Persistence and degradability

|                   |                            |
|-------------------|----------------------------|
| Product/substance | ethanediol ethylene glycol |
| Result:           | 90-100                     |
| Conclusion:       | Readily biodegradable      |
| Test:             | OECD 301 A                 |

### 12.3. ▼ Bioaccumulative potential

|                   |                                  |
|-------------------|----------------------------------|
| Product/substance | ethanediol ethylene glycol       |
| LogKow:           | -1,3600                          |
| Conclusion:       | No potential for bioaccumulation |

|                   |                                                      |
|-------------------|------------------------------------------------------|
| Product/substance | Silica, synthetic amorphous, fumed, crystalline-free |
| 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. Other adverse effects

None known.

### SECTION 13: Disposal considerations

#### RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)

None of the components are listed

#### Specific labelling

#### Contaminated packing

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

### SECTION 14: Transport information

|      | 14.1<br>UN / ID | 14.2<br>UN proper shipping name | 14.3<br>Hazard class(es) | 14.4<br>PG* | 14.5<br>Env** | Other<br>information: |
|------|-----------------|---------------------------------|--------------------------|-------------|---------------|-----------------------|
| DOT  | -               | -                               | -                        | -           | -             | -                     |
| IMDG | -               | -                               | -                        | -           | -             | -                     |
| IATA | -               | -                               | -                        | -           | -             | -                     |

\* Packing group

\*\* Environmental hazards

#### ▼ Additional information

Not dangerous goods according to ADR, IATA and IMDG.

#### 14.6. Special precautions for user

Not applicable.

#### 14.7. 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

#### 15.2. ▼ U.S. Federal regulations

##### TSCA (the non-confidential portion)

ethanediol ethylene glycol is listed

##### Clean Air Act

ethanediol ethylene glycol is regulated as a hazardous air pollutant (HAPS)

##### EPCRA Section 302

None of the components are listed

##### EPCRA Section 304

None of the components are listed

##### EPCRA section 313

ethanediol ethylene glycol is listed

##### CERCLA

ethanediol ethylene glycol is regulated with a Reportable Quantity (RQ) of: 5000 pounds

#### ▼ Hazardous chemical inventory reporting

This product is subject to Tier II reporting.

#### State regulations

##### California / Prop. 65

ethanediol ethylene glycol is known to cause: Developmental Toxicity

NSRL/MADL (µg/day): 8700 (oral)

—

[Massachusetts / Right To Know Act](#)

None of the components are listed

[New Jersey / Right To Know Act](#)

ethanediol ethylene glycol / Substance number: 0878

—

[New York / Right To Know Act](#)

None of the components are listed

[Pennsylvania / Right To Know Act](#)

ethanediol ethylene glycol is listed

ethanediol ethylene glycol is hazardous to the environment (E)

—

[15.4. Restrictions for application](#)

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

[15.5. Demands for specific education](#)

No specific requirements.

[15.6. Additional information](#)

Not applicable.

[15.7. Chemical safety assessment](#)

No

[15.8. Sources](#)

OSHA Hazard Communication Standard (29 CFR 1910.1200)

## SECTION 16: Other information

[Full text of H-phrases as mentioned in section 3](#)

H302, Harmful if swallowed.

[The full text of identified uses as mentioned in section 1](#)

None known.

[Abbreviations and acronyms](#)

ACGIH = American Conference of Governmental Industrial Hygienists

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

CERCLA = Comprehensive Environmental Response Compensation and Liability Act

DOT = Department of Transportation

EINECS = European Inventory of Existing Commercial chemical Substances

EPCRA = Emergency Planning and Community Right-To-Know Act

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HCIS = Hazardous Chemical Information System

HNOC = Hazards Not Otherwise Classified

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

NFPA = National Fire Protection Association

NIOSH = National Institute for Occupational Safety and Health

OECD = Organisation for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

PBT = Persistent, Bioaccumulative and Toxic

RCRA = Resource Conservation and Recovery Act

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SARA = Superfund Amendments and Reauthorization Act

SCL = A specific concentration limit.

STEL = Short-term exposure limits

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TSCA = The Toxic Substances Control Act

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

#### Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

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: US-en