SAFETY DATA SHEET

Fumed Silica Suspension, 0,2 µm, Water free

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

1.1. Product identifier

Trade name

Fumed Silica Suspension, 0,2 µm, Water free

Product no.

48133015, 48133017 (1060, 1070, 1075)

Unique formula identifier (UFI)

2MDE-JQQV-6PCU-0AUQ

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

▼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

08/01/2023

SDS Version

2.0

Date of previous version

23/09/2021 (1.0)

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).
See section 4 “First aid measures”.

SECTION 2: Hazards identification

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)

Safety 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)

Hazardous substances
ethanediol ethylene glycol

▼Additional labelling
UFI: 2MDE-JQQV-6PCU-0AUQ

2.3. Other hazards
The CAS-No. 7631-86-9 is an old CAS-no. and is related to silica in general (silicon dioxide SiO2) in all physical forms. The CAS-No. 112945-52-5 is the new CAS-No. for pyrogenic or fumed synthetic amorphous silica.

▼Additional warnings
This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.
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) 2018/605.

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 EC No.: 203-473-3 UK-REACH: Index No.: 603-027-00-1	<80%	Acute Tox. 4, H302 STOT RE 2, H373	[1]
Silica, synthetic amorphous, fumed, crystalline-free	CAS No.: 112945-52-5 EC No.: 231-545-4 UK-REACH: Index No.:	<20%		

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

▼Other information
[1] European occupational exposure limit.

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.
If skin irritation occurs: Get medical advice/attention.

Eye contact

Upon irritation of the eye: Remove contact lenses and open eyes widely. Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Seek medical assistance and continue flushing during transport.

▼Ingestion

In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor. Hold head facing down to prevent vomit returning mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

▼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

Call a POISON CENTER/doctor if you feel unwell.

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

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) 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.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

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.
Use sand, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials 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.

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 temperature

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

ethanediol ethylene glycol
Long term exposure limit (8 hours) (ppm): 20(vapour)
Long term exposure limit (8 hours) (mg/m³): 10(particulate)/52(vapour)
Short term exposure limit (15 minutes) (ppm): 40 (vapour)
Short term exposure limit (15 minutes) (mg/m³): 104 (vapour)
Annotations:
Sk = Can be absorbed through the skin and lead to systemic toxicity.

Silica, synthetic amorphous, fumed, crystalline-free
Long term exposure limit (8 hours) (mg/m³): 6

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

No data available.

▼PNEC

No data available.

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.

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. Always wash hands, forearms and face.

Measures to avoid environmental exposure

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

8.3. Individual protection measures, such as personal protective equipment

▼Generally

Use only UKCA marked protective equipment.

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

Colour
White

▼Odour / Odour threshold
Sweet

▼pH
Testing not relevant or not possible due to the nature of the product.

▼Density (g/cm³)
Testing not relevant or not possible due to the nature of the product.

▼Kinematic viscosity
Testing not relevant or not possible due to the nature of the product.

▼Particle characteristics
Does not apply to liquids.

Phase changes

▼Melting point/Freezing point (°C)
Testing not relevant or not possible due to the nature of the product.

▼Softening point/range (waxes and pastes) (°C)
Does not apply to liquids.

▼Boiling point (°C)
198

▼Vapour pressure
Testing not relevant or not possible due to the nature of the product.

▼Relative vapour density
Testing not relevant or not possible due to the nature of the product.

▼Decomposition temperature (°C)
Testing not relevant or not possible due to the nature of the product.

Data on fire and explosion hazards

▼Flash point (°C)
111
▼Auto-Ignition (°C)
Testing not relevant or not possible due to the nature of the product.
▼Flammability (°C)
Testing not relevant or not possible due to the nature of the product.
▼Lower and upper explosion limit (% v/v)
1.8 - 12.8

Solubility

▼Solubility in water
Completely soluble
▼n-octanol/water coefficient
Testing not relevant or not possible due to the nature of the product.
▼Solubility in fat (g/L)
Testing not relevant or not possible due to the nature of the product.

9.2. Other information

▼Other physical and chemical parameters
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
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
The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

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

▼Acute toxicity

Product/substance	ethanediol ethylene glycol
Test method	
Species	Rat
Route of exposure	Intravenous
Test	LD50
Result	3260 mg/kg
Other information	

Product/substance	ethanediol ethylene glycol
Test method	
Species	Guinea pig
Route of exposure	Oral
Test	LD50
Result	5500 mg/kg
Other information	

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

Other information

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

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.

11.2. Information on other hazards

▼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.

▼Endocrine disrupting properties

None known.

▼Other information

None known.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	ethanediol ethylene glycol
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	EC50
Result	13140 mg/L
Other information	

Product/substance	ethanediol ethylene glycol
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	18500 mg/L

Other information

Product/substance	Silica, synthetic amorphous, fumed, crystalline-free
Test method	
Species	Daphnia
Compartment	
Duration	24 hours
Test	LC50
Result	>10000 mg/L
Other information	

Product/substance	Silica, synthetic amorphous, fumed, crystalline-free
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	>10000 mg/L
Other information	

12.2. Persistence and degradability

Product/substance	ethanediol ethylene glycol
Biodegradable	Yes
Test method	OECD 301 A
Result	90-100

12.3. ▼Bioaccumulative potential

Product/substance	ethanediol ethylene glycol
Test method	
Potential bioaccumulation	No
LogPow	-1,3600
BCF	No data available.
Other information	

Product/substance	Silica, synthetic amorphous, fumed, crystalline-free
Test method	
Potential bioaccumulation	No
LogPow	No data available.
BCF	No data available.
Other information	

12.4. ▼Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. ▼Endocrine disrupting properties

None known.

12.7. ▼Other adverse effects

None known.

SECTION 13: Disposal considerations

▼Waste treatment methods

Product is covered by the regulations on hazardous waste.
HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 6 - Acute toxicity
Dispose of contents/container to an approved waste disposal plant.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

▼EWC code

Not applicable.

▼Specific labelling

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	-	-	-	-	-	-
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. ▼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.
People under the age of 18 shall not be exposed to this product.
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.

▼Demands for specific education
No specific requirements.

▼SEVESO - Categories / dangerous substances
Not applicable.

▼Additional information
Not applicable.

▼Sources
The Management of Health and Safety at Work Regulations 1999.
The Health and Safety at Work etc. Act 1974 Regulations 2013.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.
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

Full text of H-phrases as mentioned in section 3
H302, Harmful if swallowed.
H373, May cause damage to organs through prolonged or repeated exposure.

▼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
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
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
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)
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
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 substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

▼The safety data sheet is validated by

iro@akasel.com

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue 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