


MATERIAL SAFETY DATA SHEET

1. Product and company identification

- a. **Product Name** Micro Sized, Spherical Silica Powder.
SILNOS 190
- b. **Recommended use of the chemical And restrictions on use**
Relevant identified uses Cosmetics
Uses advised against No data available
- c. **Manufacturer/Supplier/Distributor Information**
Name ABC NANOTECH CO., LTD.
Address 551 Yongsan-Dong, Yuseong-Gu, Daejeon City 305-500, KOREA
Emergency phone number +82-42-936-9001
Department Quality Control Team

2. Hazards identification

- a. **Hazard-Risk Classification** Not Classified
- b. **Label elements including precautionary statements**
Symbol

Signal Word Not applicable
Hazard-Risk Statement Not applicable
Precautionary Statement Avoid breathing dust/fume/gas/mist/vapours/spray.
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Response Remove to fresh air. Take a rest by comfortable position
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor/.../if you feel unwell
Storage Store in a well-ventilated place. Keep container tightly closed
Store locked up
Disposal Dispose of contents/container in accordance with local/ regional/ national/ international regulations.
- c. **Other Hazard-Risk which are not included in the classification criteria (e.g. dust explosion hazard)**
Health 1
Flammability 0
Reactivity 0

3. Composition/Information on ingredients

Chemical Name	CAS number	Classification		Content(%)
		Regulation (EC) No 1272/2008	67/548/EEC	
Synthetic Amorphous Silica	7631-86-9	Not classified.	Not classified.	> 98.0

4. First aid measures

- a. Eye contact** Immediately flush lightly with plenty of water for at least 20 minutes.
If symptoms develop, seek medical attention
- b. Skin contact** Wash skin for personal hygienic reasons. If symptoms develop, seek medical attention
- c. Inhalation** Remove to fresh air. If not breathing, give artificial respiration.
If breathing is difficult, give oxygen. If symptoms develop, seek medical attention..
- d. Ingestion** Do not induce vomiting. If conscious, rinse mouth with water.
If symptoms develop, seek medical attention..
- e. Indication of immediate medical attention and notes for physician**
Treat symptomatically for lung or eye irritation, if present.

5. Fire-Fighting measures

- a. Suitable (and unsuitable) extinguishing media**
Use alcohol foam, carbon dioxide, water spray, sand for extinction
- b. Specific hazards arising from the chemical
(e.g. nature of any hazardous combustion products)**
- Pyrolysate** Crystal form Silica
- Fire or Explosion** Silica is an inorganic dust and will not create nor support conditions that would result in a dust explosion or fire.
- C. Special protective equipment and precautions for fire-fighters**
- Wear proper protective equipment..
- Fight fire with normal precautions from a reasonable distance.
- Dig a ditch for slaking water to be disposed and prevent the loss of the substances..
- Stop leak if safe to do so
- Extinguish the fire from a distance or use an unmanned fire extinguisher when fires on a tank occurs..
- Cool the container down with much water after putting out the fire on a tank..
- Step back immediately if the pressure relief device makes high pitched sound or tank discolors after the fire.
- Step back from the tank engulfed in flames after the fire on the tank.

If possible, use an unmanned fire extinguisher when large scale fire occurs, and if not, just let it burn.

6. Accidental release measures

a. Personal precautions, protective equipment and emergency procedures

Do not breathe dust/fume/gas/mist/vapours/spray..

Wear goggles if release creates conditions where eye contact is probable.

Ventilate area if necessary

If user operations generate dust, then an approved respirator for dust/mists is recommended..

b. Environmental precautions and protective procedures

Prevent inflow of it into waterway, drain, basement or enclosed space.

c. Methods and materials for containment and cleaning up

Spills may be collected, preferably by vacuum, and placed in suitable container for disposal

7. Handling and storage

a. Precautions for safe handling

Do not eat, drink or smoke when using this product.

Do not breathe dust/fume/gas/mist/vapours/spray.

Contaminated work clothing should not be allowed out of the workplace.

Follow the precaution for MSDS/label because there can be residues from the product after emptying out the container.

Handle/store it with care.

Drew the cork out with care.

Prevent prolonged or continuous contact with skin.

Note the substances and conditions to avoid.

Note the manual for engineered safeguard and personal protective equipment when working.

b. Conditions for safe storage (including any incompatibilities).

Store at the storage with locking device.

Product should be stored dry and away from volatile chemicals

2 years from the date of receipt under proper storage condition

8. Exposure controls & personal protection

a. Control parameters (e.g. occupational exposure limit values, biological limit values)

Korea Limit	TWA - 10mg/m ³
ACGIH	None
BEI	None

b. Appropriate engineering controls

If user operations generate dust, fume, or mist, use ventilation to minimize dust levels.

c. Personal protective equipment

An approved air-purifying respirator (APR) for particulates may be appropriate to control exposure to dust.

Protection provided by air-purifying respirators is limited.

Use a positive-pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are not known, or any circumstances where air-purifying respirators may not provide adequate protection.

Use of respirators must include a complete respiratory protection program in accordance with national standards and current best practices.

The following agencies/organizations approve respirators and/or criteria for respirator programs.

US

NIOSH Approval under 42 CFR 84 Required
OSHA (29 CFR 1910.134)

EU

CR592 Guidelines for the Selection and Use of Respiratory Protection.
Germany: DIN/EN 143 Respiratory Protective Devices for Dusty Materials.

UK

BS 4275 Recommendations for the Selection.
Use and Maintenance of Respiratory Protective Equipment.
HSE Guidance Note HS(G)53 Respiratory Protective Equipment.

9. Physical and chemical properties**a. Appearance (physical state, color etc)**

Appearance

Soild(powder)

Color

Fine white

b. Odour

None

c. Odour threshold

None

d. pH

6~9 (approximately 10% silica in the distilled water)

e. Meting point/freezing point

> 1600 °C

f. Initial boiling point and boiling range

> 2230 °C

g. Flashing point

2230 °C

h. Evaporation rate

None

i. Flammability (solid, gas)

None

j. Upper/lower flammability or explosive limits

- / -

k. Vapor pressure

None

l. Solubility

None

m. Vapor density

None

n. Specific gravity

2.2

o. Partition coefficient: n-octanol/water

None

p. Auto-ignition temperature

None

q. Decomposition temperature

None

r. Viscosity

None

s. Formula mass

None

10. Stability and reactivity

a. Chemical stability and possibility of hazardous reactions

High temperatures can cause toxic gas through evaporation.

Explosion risk in case of fire.

It is not very flammable; however, it can become partially burnt..

Nonflammability: it is not very flammable, but it can cause corrosive/toxic fumes when heating up..

b. Conditions to avoid (e.g. static discharge, shock or vibration, etc):

Heat, sparks, flames etc. sources of ignition

c. Incompatible materials

Combustible materials, Reducing substances

d. Hazardous decomposition products

Causticity/Toxic fume

Irritation, Causticity, Toxic gases

11. Toxicological information**a. Information on the likely routes of****Exposure**

May cause respiratory irritation.

b. Health hazards information**Acute toxic****Oral**

LD50 3,300 mg/kg

※ SIDS

Skin

LD50 5,000 mg/kg

※ SIDS

Inhalation

Dust LC50> 2.0 mg/l

※ SIDS

Skin corrosive/irritant

No irritation (Experimental phase)

※ SIDS

Serious eye damage/eye irritation

No irritation (Experimental phase)

※ SIDS

Respiratory sensitization

None

Skin sensitization

None

Carcinogenicity**IARC**

Group 3 Silica, amorphous

NTP

None

OSHA

None

EU CLP

None

ACGIH

None

Germ Cell Mutagenicity

Experiment result , No mutagenic

※ SIDS

Reproductive toxicity

None

Specific target organ toxicity (single exposure)

None

Specific target organ toxicity (repeated exposure)

None

Aspiration hazard

None

12. Ecological information**a. Aquatic and terrestrial ecotoxicity****Fish**

LC50 5000 mg/l 96 hr

Shellfish

LC50 7600 mg/l 48 hr

Birds

EC50 440 mg/l 72 hr

b. Persistence and degradability

Persistence	log Kow 0.53
Degradability	None
c. Bioaccumulative potential	
condensability	BCF 3.162
Biodegradable	None
d. Mobility in soil	None
e. Other adverse effects	None

13. Disposal considerations

- a. Disposal method (According to the related laws) dispose the container and contents.
- b. Disposal precaution (including the disposal method of contaminated container and packaging) (According to the related laws) dispose the container and contents.

14. Transport information

- a. UN Number Not applicable
- b. UN proper shipping name Not applicable
- c. Transport hazard class Not applicable
- d. Packing group (if applicable) Not applicable
- e. Marine pollution (yes/no) No
- f. Special precaution which a user to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises
- Emergency measures in case of fire Not applicable
- Emergency measures in case of outflow Not applicable
- g. Shipping Name (CFR): Non-hazardous
- h. Hazard Class (CFR): Not applicable
- i. Additional Hazard Class (CFR): Not applicable
- j. Packaging Group (CFR): Not applicable
- k. UN ID Number (CFR): Not applicable
- l. Shipping Name (IATA): Non-hazardous
- m. Hazard Class (IATA): Not applicable
- n. Additional Hazard Class (IATA): Not applicable
- o. Packaging Group (IATA): Not applicable
- p. UN ID Number (IATA): Not applicable

15. Regulatory information

- a. International regulation
- | | |
|--|----------------|
| US Administration Information (OSHA regulation) | Not applicable |
| US Administration Information (CERCLA regulation) | Not applicable |
| US Administration Information (EPCRA 302 regulation) | Not applicable |
| US Administration Information (EPCRA 304 regulation) | Not applicable |

US Administration Information (EPCRA 313 regulation)	Not applicable
US Administration Information (Rotterdam agreement substance)	Not applicable
US Administration Information (Stockholm agreement substance)	Not applicable
US Administration Information (Montreal Protocol substance)	Not applicable
EU classification information (Conform classification result)	Not applicable
EU classification information (danger word)	Not applicable
EU classification information (safety word)	Not applicable

b. Korea regulation

Industrial Safety and Health Act	Material with exposure standard setting
Toxic Chemical Control Act	Not applicable
Dangerous Material Safety Control Act	Not applicable
Wastes Management Act	Designated waste
POPs Control act	Not applicable

16. Other information

a. Information source and references

SIDS, TOMES; HAZARTEXT(Oral)
 SIDS, IUCLID (Skin)
 SIDS, IUCLID (Inhalation)
 SIDS, IUCLID (Skin corrosion or Irritation)
 SIDS, (Skin Sensitization)
 IUCLID(Fish)
 IUCLID(Shellfish)
 IUCLID(Birds)
 KOSHA:KOREA OCCUPATIONAL SAFETY AND HEALTH AGENCY(Other information)

b. Issuing date 10/01/2002

c. Revision number 7.1

d. Last revision date 04/12/2015

e. others None

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