

MATERIAL SAFETY DATA SHEET

1. Product and company identification

- a. **Product Name** Micro Sized, Spherical Silica Powder.
SILNOS 290
- 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 Not applicable
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 protection.
Response Remove to fresh air. Take a rest by comfortable position
Get medical advice/attention if you feel unwell.
Storage Store in a well-ventilated place. Keep container tightly closed
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)	67/548/EEC	
Synthetic Amorphous Silica	7631-86-9	No 1272/2008 Not classified.	Not classified.	100

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

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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)

OSHA	PEL – 6 mg/m ³
ACGIH	TLV – 10 mg/m ³
Korea Limit	TWA - 10mg/m ³

* for silicon dioxide which includes all forms of silicas (e.g. also crystalline and natural forms)

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

Chemical stability:

Stable

Possibility of hazardous reactions :

Hazardous polymerisation does not occur

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

Open flames and sparks, extreme heat, oxidizing materials.

c. Incompatible materials :

Oxidizing materials and strong caustic materials can cause a reaction.

d. Hazardous decomposition products:

Incomplete combustion can form CO, CO₂, and dense smoke.

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 5,000 mg/l 96 hr

Shellfish

LC50 7,600 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. **Marin 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 Informatio (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 (Confilm 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

2002-10-01

c. Revision number

7.5

d. Last revision date

2017-06-20

e. others

None

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