Safety Data Sheet

1. Identification of the substance or mixture and of the supplier

A. GHS product identifier: Synthetic Amorphous Silica (SAS)
Trade name: 3D Me!
B. Recommended use of the chemical and restrictions on use
Recommended use: Not available
Restrictions on use: Not available
C. Supplier
Company name: THE CRAFT ATTACK
Address: 826 E CAMERON AVE. WEST COVINA, CA 91790
D. Emergency phone number: 714-576-6588
Respondent: Not available

2. Hazards identification

A. GHS classification of the substance/mixture
Not classified according to OSHA 29 CFR 1910.1200
B. GHS label elements, including precautionary statements
Pictogram and symbol : Not applicable
Signal word : Not applicable
Hazard statements : Not applicable
Precautionary statements
Precaution : Not applicable
Treatment : Not applicable
Storage : Not applicable
Disposal : Not applicable
C. Other hazard information not included in hazard classification (NFPA)
Health: 0
Flammability: 0
Reactivity: Not available

3. Composition/information on ingredients

Chemical Name	Common Name(Synonyms)	CAS number	EC number	Content (%)
Synthetic Amorphous Silica (SAS)	Silica Silicic oxide Silicon(IV) oxide	7631-86-9	231-545-4	100 %

4. First aid measures

A. Eye contact
- Possible discomfort is due to foreign substance (particles effect).
- Rinse the eyes with plenty of water.

B. Skin contact
- Rinse with water.

C. Inhalation
- Possible effects are cough and sneezing.
- Affected person to be taken to fresh air.

D. Ingestion
- Clean mouth with water and drink plenty of water.

E. Indication of immediate medical attention and notes for physician

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Fire fighting measures

A. Suitable (and unsuitable) extinguishing media
- Suitable extinguishing media: Not combustible. Not relevant.
- Unsuitable extinguishing media: Not combustible. Not relevant.

B. Specific hazards arising from the chemical
- Not combustible. Not relevant.

C. Special protective equipment and precautions for fire-fighters
- Not combustible. Not relevant.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures
- Avoid dust formation.
- If dust occurs, it is recommended by the producer to use dust mask with P2 filter and safety glasses with side-shield.
- No special protection required beyond normal standard safety and good industrial hygiene practice.

B. Environmental precautions and protective procedures
- Avoid outlet to waste through embankment.
- Collect spillage into suitable.
- Do not contaminate any lakes, streams, ponds, groundwater or soil.
- Obey relevant local regulations.

C. The methods of purification and removal
- Sweep up or absorb spilled material and collect in suitable container for disposal.

7. Handling and storage

A. Precautions for safe handling
- If necessary, local ventilation.
- Take precautionary measures against electrostatic discharges.

B. Conditions for safe storage
- Keep in dry place.

8. Exposure controls/personal protection

A. Occupational Exposure limits

Korea regulation : TWA = 10 mg/m^3
ACGIH regulation : No information available.
Biological exposure index : No information available.
OSHA regulation : 20 mppcf TWA; (80)/(% SiO_2) mg/m^3 TWA
NIOSH regulation : 6 mg/m^3 TWA
EU regulation : No information available.

B. Appropriate engineering controls

Prevent entry into waterways, sewers, basements or confined areas.

C. Personal protective equipment

Respiratory protection
- Give artificial respiration.
- Provide sufficient ventilation.
- Remove from exporsure and move to fresh air immidiately.

Eye protection
- Eye bottles must be provided.
- Wear safety goggles.

Hand protection

- Avoid dusty handling.
- Use impermealble gloves.

Body protection

- Additional Personal Protective Equipment must be installed in accordance with local regulation.
- A safety shower and eye wash fountain should be readily available.
- Emergency showers must be provided.

9. Physical and chemical properties

A. Appearance

Description: Solid powder and granulates (at 20°C, 101.3 kPa)

Color: White

B. Odor: Odorless

C. Odor threshold: No information available.

D. pH: >= 3.5 <= 9 (25 °C)

E. Melting point/freezing point: > 1700 °C (1013 hPa)

F. Initial boiling point and boiling range: > 1700 °C (1013 hPa)

G. Flash point: Not combustible.

H. Evaporation rate: Not explosive.

I. Flammability (solid, gas): Not flammable.

J. Upper/lower flammability or explosive limits: No information available.

K. Vapor pressure: No information available.

L. Solubility (ies): 15 – 68 mg SiO_2/L (20 °C)

M. Vapor density: No information available.

N. Specific gravity: 1.9 – 2.2 g/cm^3

O. Partition coefficient: n-octanol/water: log Pow < 0.5

P. Auto ignition temperature: Not combustible.

Q. Decomposition temperature: No information available.

R. Viscosity: No information available.

S. Molecular weight: 60.074

T. Granulometry: 1–250 µm; MMAD>100 µm; ≤10<1 %(w/w)

U. Dissociation constant: pKa = 6.0–6.8 (25–40 °C)

V. Bulk density(tapped/tamped density): 50–600 g/L

W. Surface area (BET): 30–500 m^2/g

10. Stability and reactivity

A. Chemical stability and Possibility of hazardous reactions:

- It is stable.

B. Conditions to avoid:

- None known.

C. Incompatible materials:

- None known.

D. Hazardous decomposition products:

- None known.

11. Toxicological information

A. Information of Health Hazardous

Acute toxicity

Oral: Not classified

- Rats, LD_{50} > 5000 mg/kg bw (OECD TG 401,GLP)

Dermal: Not classified

- Rabbits, LD_{50} > 2000 mg/kg bw (ECETOC TG 2006)

Inhalation: Not classified

- Rats, 4hr-LC50> 0.69 mg/L (OECD TG 403, GLP)

Skin corrosion/ irritation: Not classified
- In skin irritation study with rabbits, no skin irritation was caused by 24, 48, 72 hours of exposure to this substance. (OECD TG 404,GLP)

Serious eye damage/ irritation: Not classified
- In eye irritation study with rabbits, no skin irritation was caused by 24, 48, 72 hours of exposure to this substance (OECD TG 405, GLP)

Respiratory sensitization: Not classified
- No information available.

Skin sensitization: Not classified
- No skin sensitization reaction was noted.

Carcinogenicity: Not classified
IARC 3
In carcinogenicity study, negative reaction was observed. (OECD TG 453)

Mutagenicity: Not classified
- In mutagenicity study, negative reaction was observed with, in vitro(Mammalian Chromosome Aberration Test, OECD TG 473, GLP; Mammalian Cell Gene Mutation Test, OECD TG 476, GLP; Bacterial Reverse Mutation Assay, OECD TG 471, GLP; Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells, OECD TG 482, GLP) and in vivo(Rodent Dominant Lethal Test, OECD TG 478; Mammalian Bone Marrow Chromosome Aberration Test, OECD TG 475).

Reproductive toxicity: Not classified
- In reproductive / developmental (NOAEL = 1350 mg/kg bw/day) toxicity study, there was no significant evidence for toxicity.

Specific target organ toxicity (single exposure): Not classified
- In acute inhalation toxicity study with rats, symptoms of restlessness and half-closed eyes were observed. (OECD TG 403, GLP)

Specific target organ toxicity (repeat exposure): Not classified
- In repeat inhalation toxicity study with rats, a symptom of increasing respiration rate was observed. (OECD TG 413, GLP)

Aspiration Hazard: No information available.

12. Ecological information

A. Ecological toxicity
- **Acute toxicity :** Not classified
- **Chronic toxicity :** Not classified
  - Fish:96hr-LL_0(*Brachydanio rerio*) > 10,000 mg/L (OECD TG 203, GLP)
  - Invertebrates:24hr-EL_{50}(*Daphnia magna*) > 10,000 mg/L (OECD TG 202, GLP)
  - Algae: 72hr-EL_{50}(*Scenedesmus subspicatus*) > 10,000 mg/L (OECD TG 201, GLP)

B. Persistence and degradability
Persistence: No information available.
Degradability: The maximum water solubility measured as free dissolved SiO_2 was found to be about 2.7 mmol SiO_2/L, (1.1 < pH< 8.9). (OECD TG 105)

C. Bioaccumulative potential
Bioaccumulation: No information available.
Biodegradation: No information available.

D. Mobility in soil: No information available.

E. Other hazardous effect:
- PBT criteria are not applicable to SAS due to their inherent inorganic and inert properties(no environmental hazard) as well as the abundance of SiO2 in nature as inherent component of the earth's crust and its lack of bioaccumulation potential.

13. Disposal considerations

A. Disposal method
Observe all regulations made by administration.

B. Disposal precaution

Observe all regulations made by administration.

14. Transport information

A. UN Number: Not applicable to the criteria for classification.
B. UN Proper shipping name: Not applicable to the criteria for classification.
C. Transport Hazard class: Not applicable to the criteria for classification.
D. Packing group: Not applicable to the criteria for classification.
E. Marine pollutant: Not applicable
F. Special precautions
in case of fire: Not applicable to the criteria for classification.
in case of leakage: Not applicable to the criteria for classification.

15. Regulatory information

① **KOREA Regulatory information**
A. Occupational Safety and Health Regulation : Occupational exposure limits listed
B. Toxic Chemical Control Act : Existing Chemical Substance (KE-31032)
C. Dangerous Material Safety Management Regulation : Non-dangerous goods
D. Wastes Control Act: Not regulated
E. Other regulation (internal and external)
Internal information
Persistant Organic Pollutants Acts: Not listed

② **Foreign Regulatory Information**
External information
EU classification(classification): Not classified
EU classification(risk phrases): Not applicable
EU classification(safety phrases): Not applicable
EU SVHC list: Not listed
EU Authorisation List: Not listed
EU Restriction list: Not listed
U.S.A management information (OSHA Regulation): Not listed
U.S.A management information (CERCLA Regulation): Not listed
U.S.A management information (EPCRA 302 Regulation): Not listed
U.S.A management information (EPCRA 304 Regulation): Not listed
U.S.A management information (EPCRA 313 Regulation): Not listed
U.S.A management information: Section 8(b) Inventory (TSCA): Present
Japan management information: Existing and New Chemical Substances (ENCS): (1)-548
China management information: Inventory of Existing Chemical Substances (IECSC): Present 11361
Canada management information: Domestic Substances List (DSL): Present
Australia management information: Inventory of Chemical Substances (AICS): Present
New Zealand management information: Inventory of Chemicals (NZIoC): May be used as a single component chemical under an appropriate group standard.
Philippines management information: Inventory of Chemicals and Chemical Substances (PICCS): Present
Substance of Roterdame Protocol: Not regulated
Substance of Stockholme Protocol: Not regulated
Substance of Montreal Protocol: Not regulated

16. Other information

A. Information source and references
- American Conference of Governmental Industrial Hygienists TLVs and BEIs.
- CSR (Chemical Safety Report)

- ECHA(REACH information on registered substances)
- EU CLP; http://esis.jrc.ec.europa.eu/index.php?PGM=cla
- IARC Monographs on the Evaluation of Carcinogenic Risks to Humans; http://monographs.iarc.fr
- IUCLID (International Uniform Chemical Information Database)
- National Toxicology Program; http://ntp-apps.niehs.nih.gov/ntp_tox/index.cfm
- NIOSH Pocket Guide; http://www.cdc.gov/niosh/npg/npgdcas.html
- LOLI® and LOLI Global ; http://www.rightanswerknowledge.com/

B. Issuing date : 2015.03.26

C. Revision number and date

Revision number : Rev. 00

Date of the latest revision : 2015.03.26

D. Others

•This Material Safety Data Sheet (MSDS) is authored in pursuant to the US OSHA 29 CFR 1910.1200.

•The content is based on the latest information and knowledge that we currently possess.

•This MSDS was authored to aid buyer, processor or any other third person who handles the chemical of subject in the MSDS; additionally, it does not warrant suitability of the chemical for special purposes or the commercial use of statements that approves the use of it in combination with other chemicals as well as technical or legal liabilities.

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