

SAFETY DATA SHEET

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

A. GHS product identifier : ASA

B. Recommended use of the chemical and restrictions on use

Recommended use : 3D Printing Filament

Restrictions on use : Use for recommended use only

C. Supplier

Company name : Sindoh Co. Ltd. (brand name : fabWeaver)

Address : Seongsui-ro 24-gil, Seongdong-gu, Seoul, Republic of Korea

Emergency phone number : +82-1588-5850

Respondent : +82-2-460-1114

Fax : +82-2-466-0205

2. Hazards identification

A. GHS classification of the substance/mixture

Not classified

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. GHS label elements, including precautionary statements : Not available

3. Composition/information on ingredients

Chemical Name	Common Name(Synonyms)	CAS number	EC number	Content (%)
2-Methyl-2-propenoic acid methyl ester polymer with butyl 2-propenoate, ethenylbenzene and 2-propenenitrile	AcrylonitrileStyreneAcrylate Copolymer	25852-38-4	-	97-100
Titanium dioxide	-	13463-67-7	236-675-5	< 1

4. First aid measures

A. Eye contact

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.
- Get immediate medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
- Call a POISON CENTER/doctor/etc if you feel unwell.

B. Skin contact

- In case of contact with substance, immediately flush skin with running water for at least 20 minutes.
- Remove and isolate contaminated clothing and shoes.
- Wash contaminated clothing and shoes before reuse.
- If skin irritation occurs: Get medical advice/attention.
- Call a POISON CENTER/doctor/etc if you feel unwell.

C. Inhalation

- Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Specific medical treatment is urgent.
- Keep victim warm and quiet.
- Call a POISON CENTER/doctor/etc if you feel unwell.

D. Ingestion

- Do not let him/her eat anything, if unconscious.
- Get immediate medical advice/attention.
- Call a POISON CENTER/doctor/etc if you feel unwell.

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: Dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO₂
- Unsuitable extinguishing media: High pressure water streams

B. Specific hazards arising from the chemical

- May be ignited by heat, sparks or flames.
- Fire may produce irritating and/or toxic gases.
- Inhalation of material may be harmful.
- Some liquids produce vapors that may cause dizziness or suffocation.

C. Special protective equipment and precautions for fire-fighters

- Move containers from fire area if you can do it without risk.
- Some may be transported hot.
- Runoff from fire control or dilution water may cause pollution.
- Contact may cause burns to skin and eyes.
- Dike fire-control water for later disposal; do not scatter the material.
- In case of fire: Use personal protective equipment as required.
- Fire fighters should put on appropriate protective gear and self-contained breathing apparatus.
- Fire may produce oxocarbons.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures

- Eliminate all ignition sources.
- Stop leak if you can do it without risk.
- Please note that materials and conditions to avoid.
- Ventilate the area.
- Do not touch or walk through spilled material.
- Prevent dust cloud.
- Spills and leaks: Use personal protective equipment as required.
- Evacuate personnel and unprotected persons to safe areas.

B. Environmental precautions and protective procedures

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

C. The methods of purification and removal

- Collect spillage.
- Small Spill; Flush area with flooding quantities of water.

- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.
- Powder Spill; Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

7. Handling and storage

A. Precautions for safe handling

- Please note that materials and conditions to avoid.
- Please work with reference to engineering controls and personal protective equipment.
- Be careful to high temperature.
- Do not handle until all safety precautions have been read and understood.
- Wash the handling area thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use carefully in handling/storage.

B. Conditions for safe storage

- Store in a closed container.
- Store in cool and dry place.
- Store locked up.
- Keep away from food and drinking water.
- Store in a well-ventilated place.
- Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. Exposure controls/personal protection

A. Occupational Exposure limits

OSHA regulation :

- **Titanium dioxide** : TWA = 15 mg/m³

NIOSH regulation :

- **Titanium dioxide** : NIOSH Potential Occupational Carcinogens

ACGIH regulation :

- **Titanium dioxide** : TWA = 10 mg/m³

EU regulation : Not applicable

Biological exposure index : Not available

B. Appropriate engineering controls

- Provide local exhaust ventilation system or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

C. Personal protective equipment

Respiratory protection :

- Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.

- In case exposed to gaseous/liquid material, the respiratory protective equipments as follow are recommended.
- facepiece filtering respirator or air-purifying respirator, high-efficiency particulate air(HEPA) filter media or respirator equipped with powered fan, filter media of use(dust, mist, fume)
- In lack of oxygen(< 19.6%), wear the supplied-air respirator or self-contained breathing apparatus.

Eye protection :

- Wear breathable safety goggles to protect from particulate material causing eye irritation or other disorder.
- An eye wash unit and safety shower station should be available nearby work place.

Hand protection :

- Wear appropriate protective gloves by considering physical and chemical properties of chemicals.
- Wear gloves when handling hot/molten material.

Body protection :

- Wear appropriate protective clothing by considering physical and chemical properties of chemicals.

9. Physical and chemical properties

A. Appearance

Description : Solid

Color : Milky

B. Odor : Odorless

C. Odor threshold : Not available

D. pH : Not available

E. Melting point/freezing point : Not available

F. Initial boiling point and boiling range : Not available

G. Flash point : Not available

H. Evaporation rate : Not available

I. Flammability (solid, gas) : Not available

J. Upper/lower flammability or explosive limits : Not available

K. Vapor pressure : Not available

L. Solubility (ies) : Not available (Insoluble)

M. Vapor density : Not available

N. Specific gravity : 1.07

O. Partition coefficient: n-octanol/water : Not available

P. Auto ignition temperature : Not available

Q. Decomposition temperature : Not available

R. Viscosity : Not applicable

S. Molecular weight : Not available

10. Stability and reactivity

A. Chemical stability and Possibility of hazardous reactions

- Fire may produce irritating and/or toxic gases.
- Inhalation of material may be harmful.
- Some liquids produce vapors that may cause dizziness or suffocation.

B. Conditions to avoid

- Ignition sources (heat, sparks or flames)

C. Incompatible materials

- Flammable material
- Strong oxidizing agents.

D. Hazardous decomposition products

- Irritating and/or toxic gases
- Oxocarbons

11. Toxicological information

A. Information of Health Hazardous

Acute toxicity

Oral : Not available

Dermal : Not available

Inhalation : Not available

Skin corrosion/ irritation : Not available

Serious eye damage/ irritation : Not available

Respiratory sensitization : Not available

Skin sensitization : Not available

Carcinogenicity : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with butyl 2-propenoate, ethenylbenzene and 2-propenenitrile :

- IARC, ACGIH, OSHA, NTP, EU CLP: Not listed

- **Titanium dioxide** :

IARC: Group 2B

ACGIH: A4

OSHA: Present

EU CLP: Carc. 2 (in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 μm)

- NTP: Not listed

Mutagenicity : Not available

Reproductive toxicity : Not available

Specific target organ toxicity (single exposure) : Not available

Specific target organ toxicity (repeat exposure) : Not available

Aspiration Hazard : Not available

12. Ecological information

A. Ecological toxicity

- **Acute toxicity :** Not available

Fish : Not available

Crustacean : Not available

Algae : Not available

- **Chronic toxicity :** Not available

Fish : Not available

Crustacean : Not available

Algae : Not available

B. Persistence and degradability

Persistence : Not available

Degradability : Not available

C. Bioaccumulative potential

Bioaccumulation : Not available

Biodegradation : Not available

D. Mobility in soil : Not available

E. Other hazardous effect : Not available

F. Hazardous to the ozone layer : Not applicable

13. Disposal considerations

A. Disposal method :

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

B. Disposal precaution :

Dispose of contents/container in accordance with relevant regulation.

14. Transport information

A. **UN Number :** Not applicable

B. **UN Proper shipping name :** Not applicable

C. **Transport Hazard class :** Not applicable

D. **Packing group :** Not applicable

E. **Environmental hazards :** No

F. **Special precautions**

in case of fire : Not applicable

in case of leakage : Not applicable

15. Regulatory information

U.S.A Regulatory information

A. U.S.A Inventory (TSCA) :

- 2-Methyl-2-propenoic acid methyl ester polymer with butyl 2-propenoate, ethenylbenzene and 2-propenenitrile : Present (ACTIVE)
- Titanium dioxide: Present (ACTIVE)

B. U.S.A management information (OSHA Regulation) : Not regulated

C. U.S.A management information (CERCLA Regulation) : Not regulated

D. U.S.A management information (EPCRA 302 Regulation) : Not regulated

E. U.S.A management information (EPCRA 304 Regulation) : Not regulated

F. U.S.A management information (EPCRA 313 Regulation) : Not regulated

EU Regulatory information

A. Authorisations and/or restrictions on use:

- Authorisations: Not regulated
- Restrictions on use: Not regulated

B. Other EU regulations:

- SVHC list : Not regulated
- Harmonized classification – Annex VI of Regulation (EC) No 1272/2008 (CLP Regulation): Not available

Other regulations:

Substance of Rotterdam Convention : Not regulated

Substance of Stockholm Convention : Not regulated

Substance of Montreal Protocol : Not regulated

16. Other information

A. Information source and references :

Safety Data sheet provided by JF Polymers (Suzhou) Co. Ltd.

UN Recommendations on the transport of dangerous goods 17th;

https://www.unece.org/trans/danger/publi/unrec/rev20/20files_e.html

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans;

<http://monographs.iarc.fr>

National Toxicology Program;

<https://ntp.niehs.nih.gov/whatwestudy/assessments/cancer/roc/index.html>

TOMES-LOLI®; <http://www.rightanswerknowledge.com/loginRA.asp>

Korea Occupational Health & Safety Agency; <http://www.kosha.or.kr>

National Chemicals Information System; <http://ncis.nier.go.kr/main.do>

Ministry of Public Safety and Security-Korea dangerous material inventory management system; <http://hazmat.mpss.kfi.or.kr/index.do>

Waste Control Act enforcement regulation attached [1]

B. Issuing date : February 24, 2022

C. Revision number and date

revision number : Rev.(00)

date of the latest revision : February 24, 2022

D. Others :

- The content is based on the latest information and knowledge that we currently possess.
- This SDS was authored to aid buyer, processor or any other third person who handles the chemical of subject in the SDS; 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.
- The content of the SDS may vary depending on the country or the region and may not coincide with the actual regulations. Therefore, the buyer or the processor of the chemical is responsible for observing responsible government's or the region's regulations.