Issued Date: January 2019

Safety Data Sheet

1. IDENTIFICATION

Chemical product name: Formed Glass Aggregate “Porous Alpha (Porous α) P310/P03/PG1020/PG2035”

Name of manufacturer: Tottori Resource Recycling, Inc.
Address: 583, Higashisono, Hokuei-cho, Tohaku-gun, Tottori, Japon
Contact: https://www.t-rrl.jp/en/contact/ (via company website)
Phone number: +81-(0)858-49-6230 FAX number: +81-(0)858-49-6288
Emergency phone number: +81-(0)858-49-6230
Recommended use of the chemical and restrictions on use: Soil conditioning, Water treatment, Microbial Deodorizing

2. HAZARDS IDENTIFICATION

Physical hazards: Not identified
Health hazards: Not identified
Environmental hazards: Not identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Soda-lime glass
Chemical formula or constitutional formula: Ab esse (amorphousness)
Discrimination of single component
Composition and Component information:

Ingredients (Chemical formula)	Composition (%)	CAS Number [1)]
SiO_2	69.7~73.5	7631-86-9
Na_2O	12.9~14.2	1313-59-3
CaO	10.0~11.0	1305-78-8
Al_2O_3	1.8~2.8	1344-28-1
K_2O	0.1~1.6	12136-45-7
Fe_2O_3	0.03~0.26	1309-37-1

99% are composed with the above component.
Besides Ti, Cr, Mn, Ni and S etc. are included as minor elements.

4. FIRST-AID MEASURES

Inhalation: Move the exposed person to fresh air at once, blow the nose and gargle with water. Get medical attention in case to inhalant heavily.
Skin contact: Flush skin with plenty of water
Eye contact: Flush eyes with a lot of water immediately. Get medical attention if irritation develops.
Ingestion: Wash out mouth with a lot of water or salt water. Get medical attention in case to ingest heavily.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Extinguishing agent, water *for surrounding fires, extinguishing agent is suitable.
Unsuitable extinguishing media: None (no chemical reaction to extinguishing agent)
Specific hazards arising from the chemical: Not identified
Note: Non-flammable. Softening arises at a high temperature.

6. ACCIDENTAL RELEASE MEASURES
Personal precautions, protective equipment and emergency procedures: Not required
Environmental precautions: Not required
Methods and material for containment and cleaning up: Not required

7. HANDLING AND STORAGE
Precautions for safe handling: jettisoning is prohibited to avoid breaking bag.
Storage: Storage in building is desirable.

8. XPOSURE CONTROLS/PERSONAL PROTECTION
Occupational Exposure Limits:
・ACGIH(TLVs)-TWA(2018)[2]: Inhalable 10mg/m^3, Respirable 3mg/m^3
(Debris, rocks, minerals, metal or carbon dust)

Appropriate engineering controls: Exposure space should be enclosed, or local evacuation device should be installed in case to use in building.
Personal protective equipment: Antidust mask, dust-proof glasses, protection gloves, working cloth, working cap, protective footwear.

9. PHYSICAL AND CHEMICAL PROPERTIES
Appearance: Achroma or light green etc.
Odor: Odorless
True density: ca 2.5 g/cm^3
Size density: 0.9～1.2 g/cm^3
Grain shape: Abrasive infinite shape
pH: Max. pH 10.3 or pH 7(after water washing)
Solubility: Insoluble
Softening temperature: 720～730℃ (unresolved)
Volatile: N/A
Ignitability/ Explosibility/ Flammability: N/A
Dust explosivity: N/A

10. STABILITY AND REACTIVITY
Self-reaction or explodability: N/A
Chemical stability: Stable
Possibility of hazardous reactions: N/A
Conditions to avoid: No required
Incompatible materials: N/A
Hazardous decomposition products: Not identified

11. TOXICOLOGICAL INFORMATION
Acute toxicity: N/A
Skin corrosion/irritation: N/A
Serious eye damage/irritation: N/A
Skin sensitization: N/A
Germ cell mutagenicity: N/A
Carcinogenicity: N/A
Reproductive toxicity: N/A
Specific target organ toxicity (Single exposure): N/A
Specific target organ toxicity (Repeated exposure): N/A

Aspiration hazard: There is a possibility that deposits in the lung when suck it by scattering, but the symptoms does not come out immediately.

12. ECOLOGICAL INFORMATION
PRTR materials are not included.
Based on the result of leaching test, Porous Alpha is compliant to Japanese soil environmental standard [3].

13. DISPOSAL CONSIDERATIONS
Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Applicable for soil improvement agent or land-fill materials.

14. TRANSPORT INFORMATION
Special shipping information: Not regulated
TDG regulation: Not regulated
IATA regulation: Not regulated

15. REGULATORY INFORMATION
Not conflict with Industrial Safety and Health Act.

16. OTHER INFORMATION
References cited:

1) Japan Chemicals Collaborative Knowledge Database (National Institute of Technology and Evaluation)
2) 2018 Guide to Occupational Exposure Values (ACGIH)
3) Environmental Quality Standards for Soil Pollution (Ministry of the Environment)

The information herein is given in accordance with the data in a variety of technical publications.
It is the user's responsibility to determine the suitability of this information for the adoption of necessary safety precautions.
In addition, the information herein is made based on the latest information by our investigation at the time of creation, but please understand that revision is possible by amendment of laws, regulations or the announcement of new toxicity test results.