



# Material Safety Data Sheet

## Expanded Clay Aggregate (ECA)

CAS No. 114808-60-7

### Section 1 - Chemical Product and Company Identification

**Chemical Name:** Crystalline Silicium Dioxide

**Trade Name:** ECA

**Full Name:** Expanded Clay Aggregate

**CAS No:** 114808-60-7

**EINECS No:** 238-878-4

**Hazard Classification:** This **Expanded Clay Aggregate (ECA)** is not classified as hazardous to humans or the environment.

**Uses:** Landscapes, Roof Terrace Gardens, Planters, Vertical Garden, Turfs, Sports Fields, Agriculture, Horticulture, Hydroponics, Urban Trees plantation, Construction Blocks, Wall panels, RCC, PCC, Aggregate Mortar & Roof Tiles for Sound and Thermal Insulation, Plastering, Flooring, Back fill and Drainage use, Filler material for Sound Transmission Class (STC applications).

#### Contact Information:

**Rivashaa Eco Design Solutions P. Ltd.**

3rd Floor, Royale Manor Association,  
Near Rangwala Tower, Law Garden,  
Ellisbridge, Ahmedabad - 380006,  
Gujarat, India.

**Phone:** + 91 79 26462688  
+ 91 79 26463395

**Email:** green@rivashaaeco.com

**Web:** <http://www.rivashaaeco.com>

**CIN :** U74999GJ2016PTC092832

### Section 2- Composition/Information On Ingredients

#### Composition:

Principle Components	CAS #	Grades	Chemical Composition	Category
<b>Expanded Clay Aggregate (ECA)</b> Mineral ceramic material, clay fired at 1200 °C	114808-60-7	0-30 mm (e.g. 0-1mm, 2-10mm, 8-15mm, 15-30mm)	SiO <sub>2</sub> : 60 % ±5 % Al <sub>2</sub> O <sub>3</sub> : 17 % ±3 % Fe <sub>2</sub> O <sub>3</sub> : 14 % ±2 % Other elements ( K <sub>2</sub> O, CaO, MgO, TiO <sub>2</sub> , Na <sub>2</sub> O)	Non Hazardous



## Material Safety Data Sheet

### Section 3- Hazards Identification including Emergency Overview

#### Classification of the Substance or Mixture:

#### Classification according to Regulation (EC) No 1272/2008 as amended (EU-GHS/CLP)

This mixture is not classified as hazardous to humans or the environment.

Classification according to 67/548/EEC and 1999/45/EC (EU-DSD).

This mixture is not classified as hazardous to humans or the environment.

**Primary Hazard** None

**Label Elements** There are no statutory labelling requirements under Directive 1999/45/EC, regulation 1272/2008 and regulation 453/2012.

Other hazards prolonged and repeated daily inhalation of large quantities of dust from materials containing quartz involves the risk of pulmonary silicosis and lung cancer.

Mixture not classed as PBT or vPvB

Low chance of reaching pH 10 in deionized water for lab applications.

#### Potential Health Effects:

**Inhalation** If symptoms arise remove from source of exposure to fresh air; seek medical attention if symptoms persist or develop.

The toxicological properties of this substance have not been fully investigated.

#### Skin & Eye Exposure:

**Skin:** Drench immediately with water. Remove any contaminated clothing and launder before re-use.

Obtain medical attention if symptoms develop or persist.

**Eyes:** Immediately rinse with clean water for 15 minutes. Obtain medical attention if symptoms develop or persist.

**Ingestion:** Do not induce vomiting. Wash out mouth with water and give water to drink.

Obtain medical attention if symptoms develop or persist.

Most important symptoms and effects, both acute and delayed Information not available

**Indication of any immediate medical attention and special treatment needed:** Information not available

#### Potential Chronic Health Effects:

**Carcinogenic Effects:** Not Available.

**Mutagenic Effects:** Not Available.

**Teratogenic Effects:** Not Available.

**Developmental Toxicity:** Not Available.



## Material Safety Data Sheet

### Section 4 - First Aid Measures

**Environment:** No information is available about the potential of **Expanded Clay Aggregate (ECA)** to produce adverse environmental effects.

**Ingestion:** Never attempt to induce vomiting. Do not attempt to give any solid or liquid by mouth if the exposed subject is unconscious or semi-conscious. Wash out the mouth with water. If the exposed subject is fully conscious, give plenty of water to drink. Obtain medical attention.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Skin Contact:** No information is available about the potential of this product to produce adverse skin contact effects. Using appropriate personal protective equipment, remove contaminated clothing and flush exposed area with large amounts of water. Obtain medical attention if skin reaction occurs, which may be immediate or delayed.

**Eye Contact:** Wash immediately with clean and gently flowing water. Continue for at least 15 minutes. Obtain medical attention.

#### NOTES TO HEALTH PROFESSIONALS:

**Medical Treatment:** Treat according to locally accepted protocols. For additional guidance, refer to the current prescribing information or to the local poison control information Centre. Medical treatment in cases of overexposure should be treated as an overdose and the target organs being nerves, treat it under expert medical advice and supervision.

### Section 5 - Fire Fighting Measures

**Flammability Of The Product:** **Expanded Clay Aggregate (ECA)** is nonflammable

**Flash Point:** Not Applicable.

**Auto Ignition Temperature:** Not Applicable.

**Explosion Limits, Lower:** Not Available.

**Upper:** Not Available.



**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** In case of fire, use water, dry chemical, chemical foam or alcohol-resistant foam. Use firefighting measures which suit the environment and take into account other materials which may be involved. In general, water-based extinguishers should not be used for fires involving organic materials. Use carbon dioxide or dry powder.



## Material Safety Data Sheet

### Section 6- Accidental Release Measures

**Personal Precautions, Protective Equipment and Emergency Procedures:** The following precautions are considered to be good practice when using any chemicals irrespective of their classification unless otherwise specified. Ensure adequate ventilation.

Use Personal Protective Equipment - Gloves - Eye Protection - Suitable Respirator if dust is generated during handling.

**Environmental Precautions:** Do not allow to enter storm drains or water courses. If **Expanded Clay Aggregate (ECA)** enters a water course or a sewer (including via contaminated soil & vegetation) in large quantities, contact local water authority and inform the Environment Agency.

**Methods and material for containment and cleaning up:** Sweep up the material and place into an appropriate container for disposal or re-use. Do not allow to enter drains or water courses. Dispose of by a licensed waste disposal contractor.

### Section 7 - Handling and Storage

**Precaution for Safe Handling:** Rough handling of **Expanded Clay Aggregate (ECA)** may cause dust. In the case of an unacceptably high dust level, the **expanded clay aggregate (eca)** should be watered, ventilation should be provided or the work process should be changed. Appropriate watering in particular will limit dust formation considerably.

If it is not possible to reduce the dust concentration to an acceptable level, respiratory protective equipment should be worn. **See also section 8.**

Wash Hands thoroughly after handling. Avoid breathing dust. Do not eat, drink or smoke when using this product.

**Conditions for Safe Storage, Including any Incompatibilities:** Store in a cool dry atmosphere, in original labelled containers. Refer to manufacturer for maximum safe stacking height. Keep away from heat sources, combustible materials and strong oxidising agents.

**Specific end uses of Expanded Clay Aggregate (ECA):** Landscapes, Roof Terrace Gardens, Planters, Vertical Garden, Turfs, Sports Fields, Agriculture, Horticulture, Hydroponics, Urban Trees plantation, Construction Blocks, Wall panels, RCC, PCC, Aggregate Mortar & Roof Tiles for Sound and Thermal Insulation, Plastering, Flooring, Back fill and Drainage use, Filler material for Sound Transmission Class (STC applications).





## Material Safety Data Sheet

### Section 8 - Exposure Controls/Personal Protection

**Control Parameter Limits of Ingredients subject to declaration according to WES Instruction No. C.2.1, 2442:**

**Quartz, Respirable:** 0.1 mg/m<sup>3</sup> (respirable quartz)

**Quartz, Total:** 0.3 mg

**Mineral Dust, Inert, Respirable:** 5 mg/m<sup>3</sup>

**Mineral Dust, Inert:** 10 mg/m<sup>3</sup>

**Exposition limits at the workplace**

**Dust (in general) MAC:** 10 mg/m<sup>3</sup>

**Quartz MAC 0:** 10 mg/m<sup>3</sup>

**Exposure Controls:** Compliance of limits is subject to control by means of occupational hygienic measurements.

The following personal protection measures are suggested if necessary: **Respiratory protective equipment**  
**Rubber half-mask/P2 filters.**

**Personal Protective Equipment**

**Eyes:** Wear safety glasses and chemical goggles if splashing is possible.

**Skin:** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:** Wear a NIOSH/MSHA or European Standard EN 149 approved full-face piece airline respirator in the positive pressure mode with emergency escape provisions.

### Section 9 - Physical and Chemical Properties

- **Product Name:** Expanded Clay Aggregate (ECA)
- **Appearance:** Lightweight aggregate, brown
- **Bulk Density:** 300 to 750 Kg/m<sup>3</sup>
- **Form:** Round, crushed or mixed aggregate
- **Cylinder Compressive Strength:** 2 0.9 to 3.0 N/mm
- **Dry Thermal Conductivity:** 0.09 to 0.11 W/mK
- **Surface Alkalinity:** Neutral
- **Water Absorption:** 18 to 22 %
- **Colour:** red / brown / black
- **Odour:** Odourless
- **pH at 20°C:** 6 to 10 in contact with water
- **Water Solubility:** Not Soluble
- **Boiling point:** not relevant
- **Melting Point:** > 1100 °C / 2012°F
- **Flash point:** Not Relevant
- **Self Ignition Temp.:** Not Relevant
- **Explosion Risk:** none
- **Combustion:** Incombustible

**Upper /lower flammability or explosive limits:** No Information Available

**Auto ignition temperature:** No Information Available

**Decomposition temperature:** No Information Available



## Material Safety Data Sheet

### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. **Expanded Clay Aggregate (ECA)** is stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** Incompatible materials, strong oxidants and dust generation.

**Incompatibilities with Other Materials:** Avoid contact with strong oxidizing agents and excessive heat

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, Nitrogen.

**Hazardous Polymerization:** Has not been reported.

**Corrosivity:** Non-Corrosive



### Section 11 - Toxicological Information

- **Routes of Entry:** Ingestion
- **Toxicity to Animals:** Data Not Available
- **Chronic Effects on Humans:** Causes damage to the following organs: The Nervous System.
- **Other Toxic Effects on Humans:** Hazardous in case of ingestion. **Non Hazardous** in case of inhalation.
- **Special Remarks on Toxicity to Animals:** Not Available.
- **Special Remarks on Chronic Effects on Humans:** Not Available.
- **Special Remarks on other Toxic Effects on Humans:** Not Available.
- RTECS#: unlisted
- CAS# 114808-60-7: **Expanded Clay Aggregate (ECA)** unlisted
- **Carcinogenicity:** CAS# 114808-60-7: **Expanded Clay Aggregate (ECA)** Not listed by ACGIH, IARC, NTP, or CA Prop 65.
- **Effects of Acute Exposure:** Data Not Available
- **Effects of Chronic Exposure:** Data Not Available
- **Irritancy of Product:** Data Not Available
- **Skin Sensitization:** Data Not Available
- **Respiratory Sensitization:** Data Not Available
- **Carcinogenicity - IARC:** Data Not Available
- **Carcinogenicity - ACGIH:** Data Not Available
- **Reproductive Toxicity:** Data Not Available
- **Teratogenicity:** Data Not Available
- **Embryotoxicity:** Data Not Available
- **Mutagenicity:** Data Not Available
- **Name of Synergistic Products / Effects:** Data Not Available



## Material Safety Data Sheet

### Section 12 - Ecological Information

**The product does not require classification according to the regulations of the Environmental Protection Agency.**

**Persistence and ability to decompose :** Ceramic product

**Ecotoxicity:** Not Available.

**BOD5 and COD:** Not Available.

**Products of Biodegradation:** Possibly Non Hazardous short term degradation products are not likely. Not able to decompose biologically, used as substrate in biological filters.

**Toxicity of the Products of Biodegradation:** The products of degradation are more toxic.

**Special Remarks on the Products of Biodegradation:** Not Available.

**Biological decomposition / evaluation: Physical + chemical elimination / evaluation :**

**Expanded Clay Aggregate (ECA)** is Inert, Insoluble, Does not decompose and is easy to eliminate from water.

### Section 13 - Disposal Considerations

**Disposal Recommendations:** Can be disposed of as ordinary construction waste.

**EAK Code:** 01 04 08. ( **Waste Water Treatment Method** ) Dispose of in a manner consistent with federal, state, and local regulations. Collect for recycling or recovery if possible. The disposal method for rejected products/returned goods must ensure that they cannot be re-sold or re-used. Product can be reused and recycled. Discarded materials may be disposed off with construction debris in conformity with regulations. Small quantities as household waste.

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.

US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3.

Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None Listed.

**RCRA U-Series:** None Listed.

**Packing:** Normally delivered unpacked. Plastics bags and wooden pallets may be reused, recycled or disposed according to local regulation.



## Material Safety Data Sheet

### Section 14 - Transport Information

- **UN number:** UN CPC 3756 and 1532
- **UN Proper Shipping Name:** **Expanded Clay Aggregate (ECA)**, Expanded Shale, Clay, and Slate Lightweight Aggregate (UN CPC 3756 and 1532)
- **Transport Hazard:** NONE / NOT APPLICABLE
- **Packing Group:** NOT CLASSIFIED as dangerous for transport by land, sea, air
- **Environmental Hazards:** Non Hazardous
- **Special Precautions for User:** No information available
- Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code Applicable or Maritime bulk transport only. Check with carrier
- **Land Transport ( ADR/RID ) Classification :** Not Classified
- **Inland Waterway Transport ( AND ) Classification :** Not Classified
- **Air transport ( IATA ) Classification :** Not Classified
- **Sea transport ( IMDG ) Classification :** Not Classified



This product is **NOT CLASSIFIED AS HAZARDOUS** for transport according to International Rules on transport of hazardous goods. (IMDG, IATA, ADR/RID)

**Not Dangerous Material** according to European Community Guidelines, 67/548 and 93/21 (packing and marking of dangerous products).

**Transport Information:** Transportation and shipping of **Expanded Clay Aggregate (ECA)** is **Not Restricted**. It has no known, significant hazards requiring special packaging or labeling for air, maritime, US or European ground transport purposes.

### Section 15 - Regulatory Information

#### European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

#### Risk Phrases: R 22,36,37

Harmful if swallowed, Irritating to eyes, respiratory system

**Safety Phrases:** 36 Wear suitable protective clothing, S 24/25 Avoid contact with skin and eyes.

S 37 Wear suitable gloves, S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 28A after contact with skin wash immediately with plenty of water

United Kingdom Occupational Exposure Limits , United Kingdom Maximum Exposure Limits

CAS# 114808-60-7 is not listed on **EINECS Master Inventory list**

#### Exposure Limits:

US FEDERAL TSCA CAS #114808-60-7 is not noticed by us on TSCA list.

CAS#114808-60-7 is not listed on **EINECS Master Inventory list**





## Material Safety Data Sheet

### Section 16 - Other information

The information mentioned above for **Expanded Clay Aggregate (ECA)** is believed to be accurate and represents the best information currently available to us. However, **Rivashaa Eco Design Solutions P. Ltd.** makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall **Rivashaa Eco Design Solutions P. Ltd** be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

**MSDS creation date:** October 15, 2021

**Revision Date:** Tuesday, April 16, 2014