1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product identification**
Recycled Aggregate consisting of fragments of previously used material which have been subjected to mechanical processing such as crushing and sizing.

Includes recycled asphalt, concrete, inert construction & demolition waste, natural and artificial aggregate, brick, tiles, industrial sand, ceramics and glass. Appearance is variable, but usually in the form of coarse and/or fine aggregate.

**Identified uses of the substance or mixture**
Uses in a variety or construction and non-construction applications such as:
- Fill materials including single size and graded, unbound or bound fill materials
- The manufacture of ready-mixed and pre-cast concrete
- The manufacture of Bituminous mixtures for road construction and surfacing

**Company Identification**
Aggregate Industries UK Ltd
Bardon Hall
Copt Oak Road
Markfield
Leicestershire
LE67 9PJ
United Kingdom

**Emergency Contact Details**
Telephone: 01530 510066
(Mon-Fri, 8am to 5pm) ask for H&S Team
Email: health.safety.team@aggregate.com

2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**
This product gives the potential for generation of respirable dust during handling and use. Dust may contain respirable crystalline silica. Prolonged inhalation of respirable dust can constitute a long term health hazard such as lung fibrosis. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. Repeated inhalation of excessive amounts of respirable silica may cause silicosis.

**Labelling**
The product does not need to be labelled in accordance with EC directives or respective national laws.
3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Recycled Aggregates are produced from the recovery through mechanical processing of various inert construction materials from the demolition, repair and construction of infrastructure such as roads, buildings, railways etc.

The composition and characteristics of the recycled aggregate will depend on the recycled material present. Recycled asphalt may contain coarse and fine aggregate, bitumen and other additions. Recycled concrete may contain coarse and fine aggregate, cementitious material and other additions in a hardened state.

Recycled Track Ballast may contain traces of oil and grease. Therefore exact composition can vary from source to source.

However, Recycled Aggregates may contain low levels of respirable crystalline silica in the form of natural Silica Dioxide as Quartz. This will vary dependent on original composition.

Crystalline Silica has the following hazard information:
For the full text of the H-Statements mentioned in this Section, see Section 16.

<table>
<thead>
<tr>
<th>Respirable Crystalline Silica (Quartz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS No</td>
</tr>
<tr>
<td>14808-60-7</td>
</tr>
<tr>
<td>EC No</td>
</tr>
<tr>
<td>238-878-4</td>
</tr>
<tr>
<td>Index No</td>
</tr>
<tr>
<td>[-]</td>
</tr>
<tr>
<td>Classification</td>
</tr>
<tr>
<td>STOT RE 2; H373i</td>
</tr>
<tr>
<td>Concentration</td>
</tr>
<tr>
<td>Variable dependent on source</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

**Inhalation**

Remove to fresh air and allow person to rest. If recovery is not rapid obtain prompt medical attention.

**Skin Contact**

Remove any contaminated clothing. Wash with soap/cleanser and rinse with plenty of water. If irritation persists, obtain prompt medical attention.

**Eye Contact**

Do not rub eyes, as the material is abrasive and may scratch the surface of the eye. Immediately and thoroughly irrigate with water. Seek medical attention if irritation persists.

**Ingestion**

Ingestion of significant quantities of aggregate that could cause harm is very unlikely. If material enters the mouth, do not induce vomiting. Give plenty of water to drink. Seek medical attention if feeling unwell.
5. FIREFIGHTING MEASURES

**Suitable/Unsuitable extinguishing media**
Material is not flammable or combustible. Use media suitable for other any other materials present that may be involved in a fire. For materials containing Asphalt do not use water jet or carbon monoxide.

**Special hazards arising in a fire**
Generally None. For materials containing Asphalt toxic fumes, combustion products and dense smoke may be produced.

**Special Advice for fire fighters**
Generally None. For material containing Asphalt, Do not breathe decomposition products and fumes. Use approved self-contained breathing apparatus. Wear fire retardant clothing. Use water spray to cool containers. Prevent runoff from fire control from entering waterways. Large fires should only be dealt with by trained personnel.

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**
Avoid breathing dusts and excessive physical contamination.

**Environmental precautions**
Enter into watercourses should be avoided so far as is possible.

**Methods and materials for containment and cleaning up**
Spray with water to prevent the generation of dust. Do not dry sweep residues. Contain so as to avoid the generation of dust (i.e. cover or enclose).

7. HANDLING AND STORAGE

**Precautions for safe handling**
- Handle with care so as to prevent the generation of dust.
- Use gloves to prevent mechanical irritation.
- Consider manual handling when handling bagged product.

**Safe storage**
- Materials should be stored to minimise the generation of airborne dust from wind whipping and material movement.
- Very fine dry product in bulk should be stored in enclosed silos
- Bulk aggregate containing fine material (<3mm) should not be stored in the open unless conditioned with water to avoid dust generation.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

Components with workplace exposure limits (WELs)

<table>
<thead>
<tr>
<th>Component</th>
<th>WEL (8Hr TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Inhalable Dust</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Respirable Dust</td>
<td>4 mg/m³</td>
</tr>
<tr>
<td>Respirable Crystalline Silica</td>
<td>0.1 mg/m³</td>
</tr>
</tbody>
</table>

It is recommended that occupational monitoring be completed to determine exposure.

EXPOSURE CONTROLS

Appropriate engineering controls

Use in well ventilated areas. Use mechanical ventilation in poorly ventilated areas.

Eye/Face Protection

Eye Protection in the form of safety glasses and/or goggles is required.

Hand Protection

Handle with gloves. Recommend use of impervious heavy duty gloves. Gloves should be removed and hands thoroughly washed before handling or eating any food or drink.

Skin Protection

Overalls / Impervious clothing, selected according to the workplace conditions.

Respiratory Protection

Suitable dust masks should be worn in enclosed spaces where adequate ventilation is not provided. The Chemical Agents Directive shows a requirement for respirators as a means of control should use a particulate filter type P3 or equivalent.
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties will vary dependent source, but generic properties are as follows:

<table>
<thead>
<tr>
<th>Property</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Granular solid</td>
</tr>
<tr>
<td>Odour</td>
<td>None to slight</td>
</tr>
<tr>
<td>pH</td>
<td>Various</td>
</tr>
<tr>
<td>Boiling Point / Range</td>
<td>Not determined</td>
</tr>
<tr>
<td>Melting Point / Range</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Generally Not Applicable, but for material containing Asphalt above 200°C</td>
</tr>
<tr>
<td>Flammability</td>
<td>Generally Not Applicable, but for material containing Asphalt above 230°C</td>
</tr>
<tr>
<td>Auto Flammability</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative Density</td>
<td>Above 2.0</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Dependent on rock type</td>
</tr>
<tr>
<td>Fat Solubility</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity and Chemical stability
Stable at normal temperatures and under recommended storage conditions.

Conditions to avoid
Generally None. For materials containing Asphalt avoid temperatures above 200°C.

Incompatible materials
Includes strong acids (for materials containing Limestone) and oxidising agents (for materials containing Asphalt).

Hazardous decomposition products
Generally None, However with specific reference to limestone based aggregates, these may react with acidic groundwater to release carbon dioxide gas.

Thermal decomposition of material containing Asphalt will release Hydrogen Sulphide, Carbon Dioxide, Carbon Monoxide, Particulate Matter, Sulphur Oxides, Polycyclic Aromatic Hydrocarbons (PAHs), Unburnt Hydrocarbons, Nitrogen Oxides, Vanadium Pentoxide.
11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

**Acute toxicity**
None.

**Eye Damage**
Long term contact with eyes can cause eye irritation and damage.

**Skin corrosion/irritation**
Long term contact with skin may cause mechanical skin irritation and possible dermatitis.

**Respiratory sensitisation**
Chronic exposure by inhalation may cause cough, breathlessness and lung fibrosis.

**Specific target organ toxicity - repeated exposure**
Prolonged exposure of Respirable Crystalline Silica fraction by inhalation may lead to silicosis in lungs.

**Carcinogenicity**
IARC classified respirable crystalline silica as a Group 1 carcinogen, therefore long term exposure may cause cancer.

**Ingestion**
Not likely to cause long term problems.

12. ECOLOGICAL INFORMATION

**Environmental Assessment**
When used and disposed of as intended, no adverse environmental effects are foreseen. Recycled Aggregates are inert materials and do not pose a significant ecological hazard.

**Mobility**
Recycled Aggregates are non volatile, inert materials that will sink in water and form a layer on the surface of the ground. Dust may become airborne, leading to deposition on vegetation and subsequent damage.

**Persistence and Degradability**
Recycled Aggregates are resistant to degradation and will persist in the environment.

**Ecotoxicity**
Not expected to be toxic to aquatic organisms.

**Bioaccumulative potential**
Not applicable.

**Results of PBT and vPvB assessment**
Will not meet PBT or vPvB criteria.
13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

Product
Recycled Aggregates are inert waste and can be disposed of as industrial waste in accordance with waste regulations.
It is recommended that it be disposed of via recycling or reuse.

Contaminated packaging
Dispose of as industrial waste.

14. TRANSPORT INFORMATION

Special Carriage Information
None. This product is NOT classified as dangerous for transport.
Open bulk vehicles used to carry the product should be sheeted to avoid the generation of dust.

15. REGULATORY INFORMATION

Classification

Not classified as dangerous. However, consideration of the following Hazard & Precautionary Statements is recommended:

Hazard Statements
H317 May cause skin irritation
H335 May cause respiratory irritation
H373i May cause damage to organs through prolonged or repeated exposure by inhalation.

Precautionary Statements
P261 Avoid breathing dust.
P281 Use personal protective equipment as required (see Section 8)

Safety, health and environmental regulations/legislation specific for the substance or mixture

Health & Safety at Work etc. Act 1974
Control of Substances Hazardous to Health Regulations 2002 (as amended)
Classification, Labelling and Packaging of Substances and Mixtures Regulations 2008 (as amended)
EH40/2005 Workplace Exposure Limits (as amended)
HSE Crystalline Silica EH59
16. OTHER INFORMATION

Training and Advice

Wear and use appropriate PPE

Recommended restrictions on use

Use in accordance with manufacturer’s technical instructions.

Further Information

Contact the Aggregate Industries Health & Safety Team.

Key Data used to compile data sheet

Classification, Labelling and Packaging of Substances and Mixtures Regulations 2008 (as amended)
EH40/2005 Workplace Exposure Limits (as amended)
HSE Crystalline Silica EH59