

SAFETY DATA SHEET

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1 Identification of substance / preparation and company / undertaking

RECYCLED AGGREGATE - GLASS

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Manufacturer and supplier of construction materials

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2 Composition / Information on Ingredients / Intended Uses

Composition: Recycled aggregate glass is essentially a silicate glass and consists essentially of fused sodium silicate and calcium silicate - glass. Small amounts of metallic oxides such as aluminium, iron are commonly added to form a 'tint' or colour to the glass.

Information on ingredients: Recycled aggregate glass is derived from bottles collected through public 'bottle banks' under the control of local authorities - non clinical origin - which, after collection and sorting, have been processed through traditional size reduction technologies (crushing and screening).

Intended use: Recycled aggregate glass is designed to replicate constructional sand and with intended use through traditional bulk handling technologies (hoppers, feeders, conveyors and mixers). The product is intended to be handled through traditional co for the total or partial replacement of fine aggregate within mix design eg. Concrete, asphalt etc. The product is not intended to be used for any other application or process - eg. Foundry or shot-blasting sands.

For further details of the composition of the product contact the supplying location.

3 Hazards Identification

Recycled aggregate glass constitutes a **LOW RISK** substance when associated with intended - handles in much the same manner as traditional constructional sand.

Hazards associated with recycled aggregate glass are synonymous with sand and are classified under CHIP 3 2002 (Approved Classification and Labelling Guide - 5th edition) as:

Classification on the basis of Physicochemical Properties:

Inert - not being explosive, oxidising, flammable.

Classification on the basis of health effects:

Non-toxic or harmful to human health through normal routes of entry through intended use (topical, ingestion, skin, eyes, inhalation).

However, if the product is allowed to become dry (not damp) the product may become airborne and recycled aggregate glass may become airborne and **irritation may occur** to eyes and respiratory tract. No irreversible health effects are anticipated, all effects being recoverable, unless inhaled in excessive quantities over a prolonged or extended period where respirable dust may cause a long term health hazard.

Since recycled aggregate glass are intended for use with natural aggregate the natural aggregate may contain **respirable crystalline silica (quartz)** which is likely to cause a greater hazard - "silicosis". Information on respirable crystalline silica is available from your supplying location.

Classification on the basis of environmental effects:

Inert - no harm anticipated to the aquatic or non aquatic environment.

Recycled aggregate glass is NOT catalogued in the "Approved Supply List" (7th edition).

4 First Aid Measures

Summary of First Aid Procedures

Inhalation

Immediately remove to fresh air. If breathing is stopped or irregular, apply artificial respiration and seek medical attention.

Skin Contact

Wash with water. Prolonged contact may cause irritation.

Eye Contact

Immediately and thoroughly irrigate with water. The material is abrasive and may scratch the surface of the eye. If pain persists seek medical attention.

Ingestion

Remove to fresh air and give water to drink. Seek medical advice.

5 Fire Fighting Measures

Suitable Extinguishing Media

Not applicable.

Unsuitable Extinguishing Media

Not applicable.

Special Exposure Hazards in Fire

None.

Special Protective Equipment for Fire Fighters

None.

6 Accidental Release Measures

Personal Precautions

Avoid breathing in dust.

Environmental Precautions

Entry into watercourses should be avoided.

Methods for Cleaning

Spray with water to prevent airborne dust.
Avoid dry sweeping which creates dust.

7 Handling and Storage

Handling

The product should be handled to minimise the creation of airborne dust.

Storage

No special requirements.

8 Exposure Controls / Personal Protection

Take Measures to Prevent

Inhalation of dust from should be avoided.

Exposure Control Limits / Source

Total Inhalable Dust: W.E.L. 10mg/m³
8 Hours T.W.A.

Respirable Dust: W.E.L. 4mg/m³
8 hours T.W.A.

Respirable Quartz: W.E.L. 0.1mg/m³
Crystalline Silica SiO₂ 8 Hours T.W.A.

W.E.L. = Workplace Exposure Limit

T.W.A. = Time Weighted Average

Respiratory Protection

Suitable dust masks should be worn in enclosed spaces where the handling or further crushing of dry aggregates is taking place and where adequate ventilation is not provided.

Hand Protection

Gloves.

Eye Protection

Goggles may be required.

Skin Protection

Overalls.

9 Physical and Chemical Properties

Appearance	Granular solid
Odour	None
pH	7 - Neutral
Boiling Point / Range	Not Applicable
Melting Point / Range	>1000°C
Flash Point	Non Flammable
Flammability	Non Flammable
Auto Flammability	Non Flammable
Explosive Properties	Non Explosive
Oxidising Properties	Non Oxidising
Vapour Pressure	Not Applicable - Solid
Relative Density	Above 2
Water Solubility	Not Soluble
Fat Solubility	Not Applicable

10 Stability and Reactivity**Conditions to Avoid**

None.

Materials to Avoid

None.

Avoid acids when recycled aggregate glass is blended with natural aggregates.

Hazardous Decomposition Products

None.

Soils containing limestone aggregates may react with acid groundwater to release carbon dioxide gas, which may build up in confined spaces to hazardous concentrations.

11 Toxicological Information

If inhaled in excessive quantities over a prolonged period or extended period, respirable dust can constitute a long term health hazard.

12 Ecological Information**Environmental Assessment**

When used and disposed of as intended, no adverse environmental effects are foreseen. Aggregates, even with a small blended proportion of recycled aggregate glass are, for all intents and purposes, a naturally occurring mineral.

The re-use of glass as a 'Secondary Aggregate' is considered a favourable environmental aspect through the preservation of natural aggregates for future generations.

Mobility

Non volatile materials that will sink in water and form a solid layer.

Persistence and Degradability

Resistant to degradation and will persist in the environment.

Ecotoxicity

Not toxic to aquatic organisms.

13 Disposal Consideration**Likely Residues / Waste Product**

None.

Safe Handling of Residues / Waste Product

Recycled aggregate glass should be re-introduced into the production cycle unless 'spoilt' and become waste.

Waste recycled aggregate glass is inert but should be disposed of in accordance with local and national legal requirements. See the Environmental Protection Act 1990 "Duty of Care" and other current environmental legislation.

14 Transport Information**Special Carriage Requirements**

None - open vehicles may require to be sheeted to avoid dust nuisances.

15 Regulatory Information

This product is NOT classified as dangerous for transport.

16 Other Information**Training Advice**

Wear and use Personal Protective Equipment - PPE.

Recommended Uses and Applications

For total and partial replacement of natural sands - as determined by mix design of concrete and asphalt in construction materials.

Further Information

The Sustainable Development Manager

Tarmac Limited

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Key Data Used to Compile Data Sheet

COSHH Regulations 2002

Occupational Exposure Limits 2002 EH40/2007

CHIP 3 Regulations 2002

CHIP 3 Regulations 2002 - The Compilation of Safety Data Sheets (3rd Edition)

CHIP 3 Regulations 2002 - Approved Classification and Labelling Guide 2002 (7th Edition)

CHIP 3 Regulations 2002 - Approved Supply List (5th Edition)

Crystalline Silica EH59

If you have purchased this product for supply to a third party for use at work, it is your duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet.

If you are an employer, it is your duty to tell your employees and others who may be affected of any hazards described in this sheet and any of the precautions which should be taken.

Further copies of this Safety Data Sheet may be obtained from Tarmac Limited.