

# SAFETY INFORMATION

## RECYCLED AGGREGATE

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.

**1. IDENTIFICATION OF SUBSTANCE/PREPARATION & COMPANY/UNDERTAKING** SUBSTANCE NAME - RECYCLED AGGREGATE For further details of the specification refer to the relevant Technical Data Sheet.

### 1.1 COMPANY DETAILS

Tarmac Limited  
 T3 Tarmac, Ground Floor, T3 Trinity Park,  
 Bickenhill Lane, Birmingham, B37 7ES  
 For more details visit [tarmac.com/contact](http://tarmac.com/contact)

### 2. HAZARD IDENTIFICATION

- NOT classified as dangerous in accordance with Directive 67/548/EEC or EC 1272/2008.
- Respirable dust may be released during processing, handling and use of recycled aggregates, particularly through crushing, drilling, cutting, loading and unloading of bulk aggregates. If inhaled in excessive quantities over a prolonged period or extended period, respirable dust can constitute a long term health hazard.
- Dusts containing Respirable Crystalline Silica (quartz) present a greater hazard.
- Long-term exposure to respirable dust can lead to respiratory system damage and disease. Respirable crystalline silica has been associated with the lung disease silicosis.
- Some sand aggregates are unsuitable for sand blasting operations as they may break down, producing respirable dust containing quartz.
- The quartz content of the product will vary, and is related to the type of material from which the recycled aggregate is produced. Advice on the quartz content and other chemical information is available from the supplying unit.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Produced from a range of inert materials recovered from activities including road building and repair, construction and demolition of buildings and other structures, railway track maintenance, and recovery of construction materials, industrial sand and glass.

The composition and characteristics of the aggregate will depend on the proportions of each type of recycled material within the recycled aggregate. 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. Further information on the composition, including free silica (quartz) content is available from the supplying unit, and from the Safety Data Sheets for natural aggregate, asphalt and ready-mixed concrete. In general, quartzite, sandstone, sand & gravel and glass will have the highest levels of quartz.

Hazardous Ingredients				
Substance Name	EC No	%	DSD Classification	CLP Classification
Crystalline Silica*	238-878-4	Variable	Xn; R48/20	H372

### 4. FIRST AID MEASURES

**Inhalation:** Immediately remove to fresh air. If breathing difficulties are experienced, seek medical attention.

**Skin contact:** Wash with water. Prolonged contact may cause irritation. If symptoms develop or persist, seek 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 eye wash solution or clean water. If symptoms develop or persist, seek medical attention.

**Ingestion:** Remove to fresh air. If person is conscious, rinse out mouth and give water to drink. Seek medical advice if symptoms develop..

## 5. FIRE FIGHTING MEASURES

For recycled aggregate containing asphalt, the following apply:

**Suitable Extinguishing Media:**

Dry powder, foam.

**Unsuitable Extinguishing Media:**

Do not use water. CO2 is also not suitable.

**Special Exposure Hazards in Fire:**

Hydrocarbon fumes may be released, along with other hazardous combustion products including smoke.

**Special Protective Equipment for Fire Fighters:**

Proper protective equipment including suitable respirators or breathing apparatus must be worn.

Other recycled aggregates should not be flammable, and no fire fighting measures will apply.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:**

Avoid breathing in dust. Keep dust out of eyes.

See Section 8 for guidance on personal protective equipment. See Section 7 for guidance on handling the product. Wear overalls and gloves.

**Environmental Precautions:**

Recycled aggregates are inert, but dust and fine particles should be prevented from entering watercourses and drains. Deposition of dust on vegetation and surrounding property should be avoided by controlling the release of dust at source.

**Methods for Cleaning:**

Avoid dry sweeping which creates dust. Use vacuum cleaning where practicable, or suppress dust using water sprays before cleaning up.

## 7. HANDLING AND STORAGE

**Handling:** The product should be handled to minimise creation of airborne dust. Conveyor systems should be fitted with covers to minimise wind whipping. Very fine, dry material should be conveyed in an enclosed system. Water sprays and/or local exhaust ventilation and filtration should be used as required to minimise generation of dust. Skin contact with asphalt should be avoided.

Manual handling of the product should be avoided where possible. If manual handling is necessary, full account should be taken of the Manual Handling Regulations.

**Storage:** Product should be stored to minimise the creation of airborne dust.

Bulk aggregate containing fine material (<3mm) should not be stored in the open unless it is conditioned with water. Stockpiles should be sited to avoid wind-whipping where possible. Storage bays should be fitted with 3 sides and the aggregate stored below the level of the sides to avoid wind whipping.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Inhalation of excessive quantities of dust.

Exposure Control Limits / Source				
Total Dust	W.E.L.	10mg/m <sup>3</sup>	8hrs	T.W.A.
Respirable Dust -	W.E.L.	4mg/m <sup>3</sup>	8hrs	T.W.A.
Respirable Quartz - (Crystalline Silica* SiO <sub>2</sub> )	W.E.L.	0.1mg/m <sup>3</sup>	8hrs	T.W.A.

W.E.L. = Workplace Exposure Limit

T.W.A. = Time Weighted Average

**Control Measures:** Dust should be controlled by containment, suppression and extraction/ filtration where possible. Regular monitoring should be undertaken to identify where people may be exposed to respirable dust so that further measures can be implemented to reduce exposure.



**Respiratory Protection:** Suitable respiratory protection should be used to protect against inhalation of dust, and to ensure exposure is below the Workplace Exposure Levels given at the start of this section.



**Hand Protection:** Gloves should be worn to avoid abrasion of the skin when handling the product. Wear waterproof gloves if the product is wet.



**Eye Protection:** Goggles or protective glasses should be worn to prevent dust entering the eyes if required.



**Skin Protection:** Overalls to protect skin and clothes. The use of skin barrier cream is also recommended. Hands should be washed thoroughly before handling or eating food or drink.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Granular solid.
Odour:	None to slight - varies
pH:	Various
Boiling Point / Range:	Not determined
Melting Point / Range:	Not determined
Flash Point:	Not applicable (above 200°C for asphalt)
Auto Flammability:	Not applicable (above 230°C for asphalt)
Flammability:	Not applicable
Explosive Properties:	Not applicable
Oxidising Properties:	Not determined
Vapour Pressure:	Not applicable
Relative Density:	Above 2.0
Water Solubility:	Dependant on material
Fat Solubility:	Not determined

## 10. STABILITY AND REACTIVITY

### Conditions to Avoid:

None. (except for material containing asphalt - Sources of ignition and temperatures above 200°C)

### Materials to Avoid:

Acids (for aggregates containing CaCO<sub>3</sub> & MgCO<sub>3</sub>).  
 Strong oxidising agents, e.g. chlorates  
 (for material containing asphalt)

### Hazardous Decomposition Products:

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

The substances arising from the thermal decomposition of the bitumen binder in material containing asphalt will depend on the particular conditions, but may include Hydrogen Sulphide, Carbon Dioxide, Carbon Monoxide, Particulate Matter, Sulphur Oxides, Polycyclic Aromatic Hydrocarbons, Unburnt Hydrocarbons, Nitrogen Oxides, Vanadium Pentoxide.

## 11. TOXICOLOGICAL INFORMATION

### Inhalation:

If inhaled over a prolonged or extended period, respirable dust from recycled aggregate can lead to respiratory system damage and disease. Respirable crystalline silica has been associated with the lung disease silicosis.

### Skin Contact:

Prolonged contact with skin may cause irritation and dryness, which may lead to dermatitis.

### Eye Contact:

Particles of grit or dust from recycled aggregates may irritate and scratch eyes.

### Ingestion:

Unlikely to cause any 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:

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.

### Persistence and Degradability:

Aggregates are resistant to degradation and will persist in the environment.

### Ecotoxicity:

Not expected to be toxic to aquatic organisms

## 13. DISPOSAL CONSIDERATION

### Safe Handling of Residues / Waste Product:

Recycled aggregates are usually classed as 'inert' but should be disposed of in accordance with local and national legal requirements. Recycled aggregates can be readily reused or recycled.

## 14. TRANSPORT INFORMATION

### Special Carriage Requirements:

None - not classified as dangerous for transport. Open vehicles should be sheeted or loads conditioned with water to avoid dust nuisance.

## 15. REGULATORY INFORMATION

**Classification:** Not classified as dangerous.  
However, consideration of the following risk & safety phrases is recommended:

67/548/EEC

**Risk Phrases:**

R36/37 - Irritating to eyes and respiratory system.  
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation (if respirable silica is present).

**Safety Phrases:**

S36/ 37/ 39 - Wear suitable protective clothing, gloves and eye/face protection.

EC1272/2008

**Hazard Statements:**

H317 - May cause skin irritation  
H335 - May cause respiratory irritation  
H372 - Causes damage to organs through prolonged or repeated exposure (relates possible lung damage if exposed to respirable silica\*)

**Precautionary Statements:**

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

## 16. OTHER INFORMATION

**Training Advice:**

Wear and use of PPE.

**Recommended Uses and Applications:**

Industrial and construction applications.

**Further Information:**

Contact Product Technical Support at Tarmac Limited using the details given in Section 1.

HSE Guidance Note EH40/2007  
PPE Regulations 1992  
COSHH Regulations 2002  
Environmental Protection Act 1990  
HSE Crystalline Silica EH59  
Dangerous Substances Directive (DSD) 67/548/EEC  
Classification, Labelling and Packaging  
Regulations (CLP) EC1272/2008

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

Prepared in accordance with Annex II of the REACH Regulation (EC) 1907/2006

## LEGAL NOTICE

The information in this Safety Data Sheet was believed to be correct at the time of issue. However, no warranty is made or implied as to the accuracy or completeness of this information.

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.

This Safety Data Sheet does not constitute the user's own assessment of workplace risk, and it is the user's sole responsibility to take all necessary precautions when using this product.