

Material Safety Data Sheet for Natural Aggregates

July 2015



1. Identification of Substance/Preparation & Company/ Undertaking:

Substance name: Natural Aggregates

Appearance is variable, but usually in the form of fine and/or coarse aggregate, dust, powder or block stone. Coarse aggregate may be rounded or angular.

Company Details:

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2. Hazard Identification

NOT classified as hazardous in accordance with the Chemicals (Hazard Information and Packaging for Supply) Regulations.

Respirable dust may be released during processing, handling and use of natural aggregates, particularly through crushing, drilling, cutting, loading and unloading of bulk aggregates, or if the aggregate is supplied as a fine powder. 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 mineral deposit from which the aggregate is produced. Advice on the quartz content and other chemical information is available from the Quarry.

3. Composition / Information on Ingredients

Produced from naturally occurring rock or sand and gravel mineral deposits. The mineral composition and characteristics of the aggregate will depend on the type of mineral deposit from which the aggregate is produced. Further information on the composition, including free silica (quartz) content is available from the supplying unit. In general, quartzite, sandstone, sand & gravel will have the highest levels of quartz.

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

Natural aggregates are non-flammable and are not combustible.

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. Keep dust out of eyes. See Section 8 for guidance on personal protective equipment. See Section 7 for guidance on handling the product.

Environmental Precautions:

Natural 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 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 the 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. 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

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

Exposure Control Limits / Source

Total Dust -

W.E.L. 10mg/m³ 8 Hrs T.W.A.

Respirable Dust - W . E . L . 4mg/m³ 8 Hrs T.W.A

Respirable Quartz - W . E . L . 0.1mg/m³ 8 Hrs T.W.A

Crystalline Silica SiO₂

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.

Eye Protection:

Goggles 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.

9. Physical and Chemical Properties

Appearance: Granular solid.

Odour: None

pH: Various

Boiling Point / Range: Not determined

Melting Point / Range: Not determined

Flash Point: Not applicable

Auto Flammability: Not applicable

Flammability: Not applicable

Explosive Properties: Not applicable
Oxidising Properties: Not determined
Vapour Pressure: Not applicable
Relative Density: Above 2.0
Water Solubility: Dependant on rock type
Fat Solubility: Not determined

10. Stability and Reactivity

Conditions to Avoid: None.
Materials to Avoid: Acids (for aggregates containing CaCO₃ & MgCO₃)
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.

11. Toxicological Information

Inhalation: If inhaled over a prolonged or extended period, respirable dust from natural 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 natural 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. Aggregates are naturally occurring, inert minerals 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: Natural aggregates are classed as 'inert' but should be disposed of in accordance with local and national legal requirements. Natural 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:

Risk Phrases:

R36/37 - Irritating to eyes and respiratory system.

Safety Phrases:

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

16. Other Information

Training Advice: Wear and use of PPE.

Recommended Uses and Applications: Industrial and construction applications.

Further Information:

HSEQ Advisor

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**Key Data Used to Compile Data Sheet:**

HSE Guidance Note EH40/2007

PPE Regulations 1992

COSHH Regulations 2002

Environmental Protection Act 1990

HSE Crystalline Silica EH59

Further copies of this Safety Data Sheet may be obtained from Pat Munro (AIness) Ltd

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

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