



Armourstone plays a critical role in coast protection by serving as a natural and highly effective defence against coastal erosion, storm surges, and wave impacts.

Armourstone is a coarse rock available from a size range within the BS EN 13383 specification. It's an effective choice for the protection of shorelines, structures and rivers offering long lasting wave dissipation and scour protection.

Armourstone is a form of hydraulic engineering used to disperse wave energy and reduce the impact of waves crashing against any shoreline infrastructure. It also boasts excellent drainage properties in order to maintain the structure of the land.

APPLICATIONS

- ▶ **Coastal Management:** We can find you a ideal solution to mitigate any signs of erosion
- ▶ **Urban Infrastructure:** Prevents the deformation of surrounding architectural projects and buildings
- ▶ **Shoreline Protection:** Prevents erosion caused by wave action and currents by reducing the water's ability to carry away soil
- ▶ **Breakwaters:** Structures that reduce the force of waves before they reach the shore.
- ▶ **Revetments:** Sloped structures placed along shorelines to absorb wave energy.
- ▶ **Seawalls:** Vertical structures that protect against wave action and storm surges.
- ▶ **Groynes:** Structures that extend into the sea to trap sand and prevent beach erosion.

BENEFITS



Protection from erosion

One of the primary functions of armourstone is to prevent coastal erosion, which occurs due to the constant action of waves and tides. By creating a physical barrier, armourstone shields the shoreline from being worn away, preserving beaches, cliffs, and coastal properties.



Weight and Dimension

All size ranges can be supplied in order to meet your requirements. The rocks can easily interlock to dissipate energy from the waves. Its flexibility allows it to be added or reshaped over time to meet evolving coastal protection needs.



Durability and Strength

Our rock armour is designed to withstand the test of time due to its hard wearing properties. It is a high quality rock, with a strong resistance against erosion. Its durability ensures that it remains effective for many years, reducing the need for ongoing repairs.

SPECIFICATION

- ▶ **Size Range:** 45/125mm, 63/180mm, 90/250mm, 45/180mm, 90/180mm
- ▶ **Specification:** BS EN 13383 pt 1, 2002
- ▶ **Material:** Armour Stone BSEN 13383-1
- ▶ **Aggregate Petrographic Group:** Granite
- ▶ **Supply Plant:** Glensanda Quarry, Rhugh Garbh Depot, Barcaldine, Oban, Argyll, PA37 1SE

AGGREGATE MATERIAL DATASHEETS

Sieve size (mm)	Typical grading	Specification
As required		

Property	Method	Result	Report ref
Particle Density (average of 10)	BS EN 13383-2	2.66	TR 1034785
Water Absorption	BS EN 13383-2	0.3%	TR 1034785
Resistance to Breakage	EN 1926	177 MPa	TR 1034787
Resistance to Wear (MDE)	BS EN 1097-2	9	TR 1034788
Magnesium Sulfate Soundness	BS EN 1367-2	1	TR 1034789
Aggregate Impact Value	BS 812 - 112	17	TR 1010713
Ten Percent Fines Value (soaked)	BS 812 - 111	210 kN	TR 1010712
Shape	BSEN 13383-2	LTA	N/A
Sonnenbrand	BSEN 13383-2	N/A	*Test applicable to Basalt

SUSTAINABILITY & LOCAL SOURCING

Energy use and greenhouse gas emissions

Holcim is at the forefront of sustainability and has committed to reducing both energy and greenhouse gas intensity 5% year-on-year.

Recyclable

100% of the product can be recycled thus reducing the amount of material that is sent to landfill.

Manufacturing location

Produced in the UK, with locally sourced materials under strict environmental and social legislation, for local supply.

Circular economy

We will maximise reuse and recycle, with zero waste to landfill. We improve resource efficiency through reuse, recovery and/or recycling of waste materials in our production processes. Plus, we minimise the generation of both hazardous and non-hazardous waste.

Responsible sourcing

Holcim is the first company in the world to achieve accreditation to the BES 6001 Framework Standard for the Responsible Sourcing of Construction Products.

Holcim has achieved a 'Very Good' rating for major product groups. The BES 6001 standard assesses:

- Quality Management
- Environmental Management
- Health and Safety Management
- Greenhouse Gas Emissions
- Minimising Raw Material Usage
- Labour Practice

- Biodiversity
- Community Engagement

POLICIES

Holcim's policies on the environment and community, health and safety and sustainable solutions for different product applications can be viewed on our website www.holcim.com.

COSHH DATA

Full COSHH data is available on request. Please call **01698 870970** for more information.

MANUFACTURING STANDARD

All aggregate Industries products are manufactured in accordance with ISO 9001 with factory compliance to ISO 14001.

TECHNICAL SUPPORT

Detailed guidance and assistance with the preparation of specification and use of asphalt products is available through the sales office. A free technical service is also available.

For further information, please refer to our asphalt technical services on 0845 600 0860.

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