

A person wearing a bright red jacket and a hood stands on a dark, black sand beach. A trail of footprints leads from the foreground towards the person. The ocean is visible in the background under a cloudy sky.

PEBBLES/AGGREGATE
FROM STOKKSNES, ICELAND

GYG
MINERALS



GYG Ltd

GYG Ltd. is an earth materials exporter from Iceland, specialising in pebble aggregate for various uses, such as swimming pool cladding, stone carpet, wall cladding, shotcrete, concrete, sandblasting and more.



Unique

This unique material has been created over thousands of years. Basaltic rock produced by Iceland's volcanic activity is carried under immense pressure by the glacier river Hornafjarðarfljót

from the Vatnajökull glacier into the sea, where the waves tumble the material and bring it back to shore on sand and gravel rib. The material is primarily dark-coloured and extremely hard. Pebbles are rounded, ranging in diameters from 1mm to 40mm, with surfaces that are polished and glass-like.

Sustainable

The main source of materials is the Stokksnes beach mine, a 10 km long, 1 km wide, sand and gravel rib in the Hornafjörður inlet on the East coast of Iceland. The Stokksnes mine is sustainable and environmentally friendly, since the river and the sea constantly replenishes the material into the mine. We do not have to open a quarry, blast a rock or break it in smaller sizes with appliance with waste and energy. It is simply taken on the shore in an amount so that does not affect the environment, its appearance or the ecosystem. Materials have CE certification for factory production control.





Size 8-20mm for concrete and decoration

GYG's concrete material is very smooth and strong and therefore well suited to demanding concrete projects, where low water absorption and smoothness is required.

The material has a modulus of elasticity of 45 GPa, within the desired range of concrete aggregate. This size has also been used for decoration like in garden etc.

The size 4-10mm is most suited for tile concreting.

Size 20mm+ for decoration

This material has mostly been used for decoration in garden etc.



Size 2-8mm for cladding, stone carpet and resin flooring

GYG's flooring aggregate is very popular in the flooring industry in Iceland, especially in indoor shopping and office epoxy-mix flooring. The pebbles colourful surfaces are enhanced by the epoxy solution. The material is also used in specialised flooring solutions, such as epoxy-terrazzo and outdoor polyethylene-based flooring. An additional outdoor application is for landscaping (e.g. playground gravel). This is also for cladding and resin floor.

The toughness and smoothness of the stones ensure durability whilst providing a safe environment for recreational activities.



Size 1-4mm swimming pool

GYG's swimming pool aggregate has been developed for swimming pool surfacing in partnership with a leading US-based international pool finishing company. The pool surfaces are produced using a cement-mix coat, where the cement is washed out of the surface. This process allows for pool surfaces that are smooth and clean.



Size 0-8mm concrete sand (0/8)

GYG's concrete sand can be used in the pneumatically sprayed concrete process known as Shotcrete.

Application can be for both wet-mix and dry-mix.

This aggregate is most applicable to the construction of slopes and transportation tunnels.



Size 0-3mm Black Sand

Has been used in many things such as for decoration and the material is highly suited to the various applications of abrasive blasting due to the sand's Mohs Hardness Scale rating of over 6.



Material Information:

- NaCl (EN 1744-1): 0,001%
- Water content (EN 1097-5): 2,1%
- Practical Density (EN 1097-6): 2,84Mg/m³
- Saturated (absorbtion) water (EN 1097-6): 1,33
- Mineral (EN 1097-6) : 1. Class 71%
- Mineral (EN 1097-6) : 2. Class 26%
- Mineral (EN 1097-6) : 3. Class 4%
- Strength (Los Angeles test) (EN 1097-2) 10,9-11,5
- Shape (Flakiness index) (EN 933-3): 16,8
- Frost-resistance value/test (EN 1367-6):0,1-0,2%
- Degradation: 0,2%
- After 14 days (ASTM C 1260): 0,5%
- Speck Specific Gravity (Saturated water): 1,1-1,7% (EN 1097-6)
- Elastic modulus/modulus of elasticity: 45 GPa

Mineralogical analysis:

- Basalt, fresh, dense, often glassy 1. Class 62,6%
- Basalt, fresh, often glassy 2. Class 4,9%
- Basalt, transfigure, dense* 2. Class 1,6%
- Basalt, much transfigure 3. Class 0,5%
- Basaltquartz 3. Class 1,1%
- Quartz 3. Class 2,2%
- Rhyolite* 2. Class 12,6%
- Granophyre* 1. Class 4,4%
- Diabase (dolerite)* 1. Class 2,2%
- Gabbro* 1. Class 3,8%
- Patching 3. Class 1,1%
- Various grains* 2. Class 2,7%



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