

AGGREGATE FAQ'S

What is Aggregate?

Basically, aggregate is sands, gravels and crushed stone - all the products of a pit or quarry.

Is a Pit the same as a quarry?

Generally, a pit contains loose sands and gravels that are directly excavated, screened, and transported. A Pit can produce some products that consist of round stones, whereas all products from a quarry are crushed which lead to sharp edges. A quarry contains bedrock that must be blasted first before it can be crushed into smaller particles.



What is sand and gravel used for?

Sand and Gravel is used to build roads, sewers, sidewalks, schools, factories, offices, parking lots, driveways, basements, walls, roofs, gardens, walkways, paths, recreation centers, sports fields, golf courses sand traps, landscape rock, and hiking trails, to name a few. Industrial sands are used in the process of making glass, for grit for roofing paper, and as additives to paint and stucco.

What is the difference between sand and gravel and crushed rock?

Sand and gravels are naturally occurring, in pits, while crushed rock is a product of blasting and crushing rock, in a quarry.

Where does sand and gravel come from?

Sand and gravel is found in certain geological settings in certain areas around Texas. It is not found everywhere. It used to be bedrock that was ground up by the movement and melting of glaciers during the last ice age which ended tens

of thousands of years ago. Deposits are often found in and near river deltas and at widenings in rivers where flow slows and deposits fall out.

Do you just dig up the sand and gravel and sell it?

There are many operations applied to the raw product before it is sold to the end-user. A pile of sand does not have only one grain size but it has a distribution of sizes - from small sands to 6 inch and higher cobbles.



The first operation is usually a jaw crusher - two plates forced together on a rotating basis - which breaks up large pieces of rock, found in almost all deposits. Conveyor belts take the product to screening, followed by recirculation to a cone crusher for larger particles.



Screening and classifying, separates particles of similar size in one pile. This is accomplished through the use of mechanically vibrated screens, or sieves, stacked one on top of the other.

Larger particles which remain are sent back to the cone crusher, which takes the recirculated product and reduces the size as it falls through an off-centre rotating core to break the rock. The product is then sent back to the screen. This occurs over and over for any larger sizes remaining at the top of the screen. In a rock quarry, there is more recirculation through the cone



crusher.



For various industrial applications there are different standards that say what series of sieves are used and what percentage of sand must be in each sieve to be a given size (e.g. 1/2" or 1/4"). Product passing through to the bottom of the screens is conveyed into piles or a surge bin, which then fills trucks for transport.

A washing cycle may also be included depending on the type of product. Washed, or clear, gravel will have any fines (dust, clays, fine grained) removed.

What makes a base product?

A base product is made up of a crushed or natural coarse rock and sand that is well graded to produce, when compacted, a firm stabilized sub-grade for streets, highways or even concrete slabs.

What makes for good drainage material?

There are many products that will provide a good drainage material. The material to be used is dependent on how much of a water flow there is. If the water flow is limited, a 1/4" size rock can be used. If the water flow is great, a larger size rock with a high void ratio (the open space between compacted rock) is needed such as a 3/4" to 1" size rock.

What is rip-rap?

Rip-rap is large pieces of rock (usually 6 to 30 inches in diameter) which have undergone only primary crushing and sizing, or larger, uncrushed pieces. Rip-rap is used to stabilize slopes and shorelines and construct erosion-control structures.