Sophisticated manufacturing techniques allow the expansion and collection of individual perlite bubbles, which are used as fillers or extenders for a wide variety of products. Rapidly heating perlite ore to temperatures of about 900°C (1,700°F) softens the volcanic glass causing entrapped water molecules in the rock to turn to steam and expand the particles like popcorn. Crushed expanded perlite particles present a maze of microscopic pathways that can be used to filter and clean a wide array of liquids, beverages, and pharmaceutical products. The expanded particles that result are actually clusters of minute, lightweight, insulating, glass bubbles. Broken bubbles and surface openings on the particles provide for water and air holding capacity—especially important in horticultural uses.
Applications of Perlite
the Versatile Mineral

Expanded Perlite
Granules of different bulk density and size

Crude Ore
Sandblasting, foundry & steel industries, slag coagulant, special casting sand, metal finishing, silica source

Medium to High Temperature Insulation
Boiler covering in quilted mattresses & in hardsetting compositions, pipe covering in coaxial tubes, compression molded pipe half sections, pour-in pipe insulation

Cryogenics
Super-cooled industrial gases in containers for transport & in stationary plants

Abrasives
Soaps, cleaners, polishes, dental compounds, stone wash wheels, discs

Fillers
Explosives, caulking compositions, paints, plastics, packing for shipping

Adsorption
Carrier of agrichemicals in pesticides & herbicides, fertilizer bulking, pelletized seeds, catalytic carrier, oil adsorption for pollution control & clean up

Agricultural Additive/Supplement
Poultry litter supplement to reduce odor & moisture adsorbant, animal feed anti-caking agent & filler, carrier for nutrients/medicines

Air Filtration
Pre-coat for baghouses

Liquid Filtration
Beer, wine, edible oils, citric acid, sugar, oils, pharmaceuticals, fruit juices, glucose, chemicals, wort, swimming pool water, potable water, storm water runoff, bio diesel

Ambient & Low Temperature Insulation
Roof decking, concrete floor fill, concrete blocks, bitumized perlite, perlite asphalt, core filler in wallboards, cavity wall insulations, refrigeration plants, portable ice boxes, containers

High Temperature Insulation
Foundry cores & molds, ovens, crucible topping

Oil Well Treatments
Oil well cementing & low density mud

Fireproofing
Fire insulation in safes, rooms, doors, chimney linings

Acoustic
Plasters, mortars, plaster boards, ceiling tiles & upper wall insulation, highway sound absorbing walls

Horticulture
Plant rooting, seed starting medium, growing medium, soil conditioner, seed coating, hydroponic, green roofs

Lightweight Aggregate Construction
Lightweight aggregate concrete, tilt-up panels, bricks & tiles, pottery & refractories, non-load bearing fill, tunnel walls & pipe coating, floors, masonry, roofs, pipes-leveling, insulation

Air Filtration
Pre-coat for baghouses

Liquid Filtration
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