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ARIZONA INDUSTRIAL MINERALS AND THEIR PROCESSING METHODS

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Industrial Mineral	Applicable Processing Done in Arizona
Calcium carbonate as limestone and marble for mineral filler as well as for raw material for lime and cement plants	1) Filler uses; fine dry grinding 2) Lime; grinding and calcining 3) Cement; grinding and blending with silica, alumina, and iron sources, kilning to produce clinker, regrinding with added gypsum; may be blended with admixture chemicals at concrete producers
Bentonite for desiccants and for bleaching and clarifying of edible oils	Processed out-of-state for use as desiccants, and as acid activated clay for use in clarifying edible oils and removal of organic contaminants from leach solutions
Sand and gravel for construction aggregate	Processed by crushing, screening, and washing; some flocculation chemicals may be used in reclaiming wash water
Diatomite for metallurgical process insulation	Processed by crushing, gas fired drying, and sizing by cyclones and bag houses
Tile and brick clay	Blended with other clays, grog, and slate, extruded and fired into structural clay products such as bricks, sewer pipe, and roof tile
Salt	Recovered as brine from solution mining and harvested from solar evaporation ponds; synthetic zeolites are added to some final products for use in water softeners
Cinders	Screened for use as specialty aggregate
Pumice for laundry uses and light-weight aggregate	Screened and used directly or with adsorbed oxidants and bleaches for fabric treatment as in stone-washed denim; screened for use as light-weight aggregate
Zeolites	Selectively mined, crushed, heat activated at 400° F rolled, and screened to produce sized products; also processed out-of-state; used for RAD control, adsorbents, and molecular sieves
Stone	Quarried and shaped
Perlite for filters	Selectively mined, crushed, and dried; shipped out-of-state for popping and manufacture into filters
Gypsum for wall board and agriculture	1) For wall board, selectively mined, crushed, roasted to produce plaster-of-Paris, rehydrated and fabricated into wall board 2) For agriculture, selectively mined and crushed 3) For cement additive - selectively mined, crushed, washed, dried, and screened
Silica flux	Selectively mined and crushed
Micaceous hematite for pigment	Selectively mined (reclaimed) from dumps and tailings, screened and fine sized