

**WAC 296-17A-3501 Classification 3501.**

**3501-00 Brick or clay products, N.O.C: Manufacturing**

Applies to establishments engaged in the manufacture of brick or clay products not covered by another classification (N.O.C.), such as, but not limited to, drainage or roofing tiles, building or paving bricks, wall copings, glazed or unglazed sewer or drain pipes or conduits, or similar products which are generally for industrial or construction use. Clay, which is any earth that forms a paste when added to water and hardens when heated, is widely used in making bricks and other products as described above. Brick is a molded rectangular block of clay, baked by the sun or in a kiln until hard. Similar products made of earthenware, which is a variety of coarse, porous baked clay, are included in this classification. To make bricks, clay is broken up by dry-pan grinders. After grinding, the particles pass through any one of several types of screens used for separating and grading. The mixture is fed through a pug mill to be cut and mixed then mixed with water to the desired consistency. After tempering, the pug mill extrudes a column of clay through a die, which shapes and determines the dimensions of the brick. A rotating wire cutter slices the column into proper thicknesses. Bricks are either machine molded or hand molded. The "green" bricks must be dried by sun and air, or in natural gas or electric-fired regulated kilns prior to firing. Firing dehydrates, oxidizes, and vitrifies the bricks. To make other products, clay is mixed with sand or shale, ground in a mixing machine and water is added. The liquid substance is mechanically poured into standard or specially shaped molds. All products are dried by natural warm air or steam heat. After removal from the molds, products are baked in kilns. If glazing is desired, salt is added to the kiln; the salt vaporizes and coats the products. To produce a greater degree of concentration, pressing or repressing operations may be performed, usually with hydraulic presses, subsequent to the actual formation of the products.

This classification excludes the production of raw materials which is to be reported separately in the applicable mining, quarrying or excavation classification; installation or erection of any products manufactured by establishments in this classification which is to be reported separately in the classification applicable to the type of construction or installation work being performed; the manufacture of household or decorative pottery items, including tile, which is to be reported separately in classification 3503; and the manufacture of statuary and ornamental items from concrete or plaster which is to be reported separately in classification 3509.

**Special note:** Clays are generally mined by the open-pit method. After clay has been extracted, it may be stockpiled inside for use during inclement weather. In most cases, the manufacturing of brick takes place alongside the extraction site. Clay is delivered to the manufacturing site only when clay of a different characteristic is needed to blend with the "home" clay.

**3501-01 Refractory products: Manufacturing**

Applies to establishments engaged in the manufacture of refractory products such as, but not limited to, fireproofing tile or bricks, roofing tile, flue lining, boiler or stoker tiles, enameled bricks, retorts, kiln parts, or crucibles from refractory clays with or without other refractory materials. Refractory clays are resistant to heat. Refractory materials, such as alumina, silica, and magnesite, dolomite, bauxite, do not significantly deform or change chemically in high temperatures. Usually all types of refractory products are pro-

duced in the same plant. Clay and other materials are ground, screened and mixed with water in a mixing machine. The partly fluid substance is poured into molds to form the product. After removal of the forms, items are kiln dried. The enamels are vitreous coatings produced from solutions of chemicals, salt, lead oxide or tin, into which the brick is dipped. Enameled brick requires two or three kiln burns.

This classification excludes the production of raw materials which is to be reported separately in the applicable mining, quarrying or excavation classification; installation or erection of any products manufactured by establishments in this classification which is to be reported separately in the classification applicable to the type of construction or installation work being performed; the manufacture of household or decorative pottery items, including tile, which is to be reported separately in classification 3503; and manufacture of statuary and ornamental items from plaster or concrete which is to be reported separately in classification 3509.

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