

TABLE VI

Example	Part	Roasting		Firing		Properties of product	
		Temperature (° C.)	Time (hr.:min.)	Temperature (° C.)	Time (hr.:min.)	Density	Compressive strength (kg./cm. ²)
57	Starting material:						
	Calcined kaolinite.....	45					
	Lead glass.....	45					
	Sodium nitrate.....	5					
	Zinc white.....	5					
	Water glass.....	25					
	Calcined kaolinite.....	45					
	Lead glass.....	55					
	Sodium nitrate.....	5					
	White lead.....	5					
	Water glass.....	25					
	Calcined kaolinite.....	45					
	Alumina-silicate glass.....	55					
	Potassium nitrate.....	5					
	Zinc white.....	5					
	Water glass.....	25					
	Calcined kaolinite.....	45					
	Alumina-silicate glass.....	55					
	Potassium nitrate.....	5					
	White lead.....	5					
	Water glass.....	25					
	Calcined kaolinite.....	45					
	Quartz glass.....	55					
	Sodium carbonate.....	5					
	Zinc white.....	5					
	Water glass.....	25					
	Calcined kaolinite.....	35					
	Lead glass.....	65					
	Sodium carbonate.....	5					
	Zinc white.....	5					
	Water glass.....	25					
	Calcined kaolinite.....	40					
	Alumina-silicate glass.....	60					
	Sodium thiosulfate (Na ₂ S ₂ O ₃).....	5					
	Zinc white.....	5					
	Water glass.....	25					
	Calcined kaolinite.....	40					
	Lithia-alumina-silicate glass.....	60					
	Sodium thiosulfate (Na ₂ S ₂ O ₃).....	5					
	Zinc white.....	5					
	Water glass.....	25					
	Product of Ex. 57 (comminuted).....	100					
	Water glass (No. 2).....	40					
	Product of Ex. 59 (comminuted).....	100					
	Water glass (No. 2).....	40					
	Product of Ex. 61 (comminuted).....	100					
	Water glass (No. 2).....	40					

I claim:

1. A process for the manufacture of foamed porcelain-like shaped articles which comprises mixing, per 100 parts by weight of the total components, (A) 50 to 95 parts by weight of at least one aggregate component selected from the group consisting of silicate mineral powder and a mixture of silicate glass powder and silicate mineral powder; (B) 5 to 40 parts by weight of a water glass component; (C) an inorganic alkali salt component which generates a gas by substantially decomposing at the firing temperature, said inorganic alkali salt component being selected from the group consisting of alkali metal salts of carbonic acid, sulfuric acid, sulfurous acid, thiosulfuric acid, nitric acid, nitrous acid, phosphoric acid and chloric acid, and being used in an amount of (a) 10 to 30 parts by weight when said aggregate component is a silicate mineral powder, and (b) 1 to 15 parts by weight when said aggregate component is a mixture of said silicate mineral powder and silicate glass powder; and (D) a component for adjusting the foaming temperature, said component selected from the group consisting of (a) at least one mineral powder selected from the group consisting of lead oxide and zinc white and used in an amount of 0.1 to 25 parts by weight and (b) at least one mineral powder selected from the group consisting of a magnesia compound selected from the group consisting of magnesite, brucite, magnesia clinker and spinel and a calcium compound selected from the group consisting of dolomite, dolomite clinker, calcite and gypsum and used in an amount of 0.1 to 9 parts by weight; molding the resulting mixture; and thereafter firing and foaming the resulting shaped article at a temperature between 700° and 1200° C.

2. The process according to claim 1 wherein said silicate glass powder is selected from the group consisting of the

powders of soda-lime glass, lead glass, barium glass, borosilicate glass, alumina-silicate glass, lithia-alumina-silicate glass and quartz glass.

3. The process according to claim 1 wherein said silicate mineral powder is selected from the group consisting of the powders of quartz sand, silica, olivine, garnet, petalite, beryl, cordierite, pyroxene, amphibole, talc, pyrophyllite, mica, chlorite, chrysotile, antigolite, kaolin, toseki, allophane, feldspar, apfite, zeolite, alunite, obsidian and shale.

4. The process according to claim 1 wherein said at least one aggregate component is used in an amount of 60 to 90 parts by weight, said water glass component is used in an amount of 15 to 35 parts by weight, said inorganic alkali salt component which generates a gas by substantially decomposing at the firing temperature is used in an amount of 15 to 25 parts by weight when said aggregate component is said silicate mineral powder, and 1 to 10 parts by weight when said aggregate component is a mixture of said silicate mineral and silicate glass powders, and said component for adjusting the foaming temperature is 0.2 to 20 parts by weight of at least one mineral powder selected from the group consisting of lead oxide and zinc white and 0.2 to 6 parts by weight of at least one mineral powder selected from the group consisting of said magnesia compounds and said calcium compound.

5. The process according to claim 1 wherein said silicate glass powder is selected from the powders of soda-lime glass, barium glass and borosilicate glass, said silicate mineral powder is selected from the powders of quartz sand, silica, zeolite, toseki, feldspar and splite, said inorganic alkali salt component is selected from sodium bicarbonate, sodium carbonate, sodium bisulfate, sodium sulfate and sodium thiosulfate.