

**Comparison of various masonry materials**

Feature	Cast Stone	Limestone	Architectural Precast Concrete	Calcium Silicate
Specification division	04720	04423	03450	04230
Composition	Portland cement, Coarse and fine sand. Inorganic Iron oxides pigments	Calcium Carbonate ( CaCO <sub>3</sub> ) & Magnesium Carbonate (MgCO <sub>3</sub> )	Coarse and fine sand, cement, large aggregates	Lime and Silica based sand
Typical uses	Architectural ornamentation, veneer, or trim: window/door surrounds, bands, coping, columns, balustrades, etc.	Architectural ornamentation, veneer, or trim: window/door surrounds, bands, coping, columns, balustrades, etc.	Architectural concrete structural pieces and non-structural panels, etc.	Variety of sizes and shapes is limited. Architectural applications, including exterior and interior masonry veneer.
Structural use	Can be reinforced, but has limited structural applications.	Cannot be reinforced, used primarily as non- structural veneer	Structural or non structural	Non-structural Not to be used at Grade.
Colors available	Almost unlimited	Buff, Grey & Variegated	Almost unlimited	Limited to earth tones
Size of aggregate	3/8" or less	none	3/8" to 3/4"	3/8" or less
Compressive strength	6,500 PSI minimum ASTM C1194	4,000 PSI minimum ASTM C170	5,000 PSI minimum ASTM C39	5500 PSI minimum ASTM C73-99A
Water absorption	6% maximum ASTM 1195	7.5% maximum	7% maximum	8.8 % maximum ASTM C73-99A
weight/cubic foot	140	144	145	129
Surface texture	Fine grain to simulate natural stone, textures: bush hammered, any other finish available on natural stone or terra-cotta	Fine grain, with directional grain lines	Architectural finishes such as smooth, exposed aggregate, or sandblasted: not intended to simulate natural stone	Fine grain to simulate natural stone
Method of forming into shapes	zero-slump matrix rammed into rigid formwork until densely compacted and demoulded immediately	Mined, cut, and fabricated	Pouring measurable slump concrete mix into form, vibrating, and removing forms the following day	Matrix pressed into steel molds under high pressure and demoulded immediately
Bug holes or air voids	No bug holes, guaranteed	Dependent upon grade of material selected	Yes	No
Anchors supplied by manufacturer	Supplied by Corinthian Cast Stone ( Optional)	Supplied by Corinthian Cast Stone ( Optional)	Supplied by Corinthian Cast Stone ( Optional)	Usually supplied by on-site erector.
Method of anchor attachment to stone	Anchor fastens to cast or cut anchor slots and dowel holes Engineered by CCS	Anchor attaches to cut anchor slots and dowel holes Engineered by CCS	Inserted in piece as it is poured at manufacturing facility or installed separately at the job site Engineered by CCS	Anchor fastens to cut anchor slots and dowel holes
Metal reinforcing	Galvanized, Epoxy, Stainless Steel or FRP	No	Galvanized, Epoxy, Stainless Steel or FRP	No
Industry association	Cast Stone Institute, (770) 868-5909 <a href="http://www.caststone.org">www.caststone.org</a> <a href="mailto:staff@caststone.org">staff@caststone.org</a>	Indiana Limestone Institute of America, Inc. (812) 275-4426 <a href="http://www.ilia.com">www.ilia.com</a>	Architectural Precast Association (941) 454-6984 <a href="http://www.archprecast.org">www.archprecast.org</a> <a href="mailto:info@archprecast.org">info@archprecast.org</a>	none
Keys to optimum economy	Profile repetition, average size 2.0 cu. ft., <a href="#">one flat unexposed surface</a>	Pieces with simple profiles, short distance of job site from mines	ideal for larger structural pieces such as large panels or precast lintels	Manufactured only in specific sizes