Comparison

Parameter	FLYASH BLOCK (AAC PROCESS)	Conventional Clay Bricks
Production Facility	State-of-the-art factory facility, Fully automatic & highly consistency.	Unhealthy working conditions due to toxic gases.
Size	600 mm x 250 mm x 75-300 mm	225 mm x 100 mm x 65 mm
Variation in Size	1.5 mm (+/-)	1.5 mm (+/-)
Compressive Strength	3 to 5 N/mm2	4-7 N/mm2
Density (Oven Dry)	551-650 kg/m3	1800 kg/ m3
Fire Resistance (200 mm thick wall)	Up to 8 hours	Around 2 hours
Cost Benefit	Reduction in dead weight leading to savings in steel and concrete.	None
Energy Saving	Approximately 30% for heating and cooling.	None
Water usage in Construction	Low as water needs only for surface wetting before use.	High as water needs for curing before use.
Soil Consumption	Uses fly ash which is a thermal power plant waste product & thus no consumption of top soil.	One sq ft of carpet area with clay brick walling will consume 25.5 kg of top soil.
Fuel Consumption	One sq ft of carpet area with FLYASH BLOCK (AAC PROCESS) will consume 1 kg of coal.	One sq ft of carpet area with clay bricks will consume 8 kg of coal.
CO2 Emission	One sq ft of carpet area will emit 2.2 kg of CO2.	One sq ft of carpet area will emit 17.6 kg of CO2.
Earthquake Resistance	Conformance to requirement of Seismic zone IV & V.	Conditional Conformance.
Termites & Pest Resistance	High	Low
Additional Floor Space	2-8% additional space can be achieved.	No Contribution
Workability	EASY. Can be used to create arches, curves etc.	Difficult
Labour	Organized sector with proper HR practices	Unorganized sector with rampant use of child labour.

Savings

PARAMETERS	FLYASH BLOCK (AAC PROCESS)	CONVENTIONAL BRICKS
Savings In Steel	15-20% due to lower dead weight/load	No saving
Savings In Cement	10%-15%	No saving
Savings in Mortar	70%-80% reduction in use of Mortar. Less joints results in lesser quantity of mortar for building	No saving
Savings in Plaster	60%-70% reduction in the cost of plastering. FLYASH BLOCK (AAC PROCESS) have uniform shape and texturewhich gives even surface to the walls	No saving
Savings in Labour	10%-15% saving in Labour cost	More labour required
Saving in Operational cost	25% saving in operation cost	No saving
Saving in Construction time	Installation time 3 to 3.5 times faster than conventional bricks, speedy construction due to big size	Slow constructions due to small size
Energy saving	Approx. 30%, Air-condition load, both heating and cooling will come down	No saving
Carpet Area Saving	More carpet area is available in same built-up area due to less thickness of walling: 2% - 3%	Less carpet area available due to more thickness of walling

Mixing method:

Add 25-30% water by weight of mortar into a bucket / container at which is equivalent to 10-15 liters of clean water for every 40 Kg bag of KON CRETE mortar). Gradually empty the required amount of dry mortar, mixing at the same time until workable mixture with a smooth consistency is attained. At site, further addition of water shall be adjusted to obtain desired consistency. Material can be mixed by 2 trowels facing backwards to each other. Use of mechanical mixer/ electrical stirrer is recommended for better results. Ensure that the mix is homogenous and no lumps are left.

Surface preparation:

The surface area where KON_CRETE mortar is to be applied should be thoroughly clean and free from dust, grease, oil etc. The masonry FLYASH BLOCK (AAC PROCESS) should be prewetted by sprinkling water before applying the mortar. Alignment on the concrete slab should be done by using conventional cement mortar to get the desired line/level.

Application:

- **After the first course of FLYASH BLOCK (AAC PROCESS) laying at bottom layer, apply a thin uniform layer of KON_CRETE mortar approx.3-4 mm thickness on the FLYASH BLOCK (AAC PROCESS) usingproper trowel.**
- **Place the subsequent line of FLYASH BLOCK (AAC PROCESS) on the evenly laid jointing mortar bed by gently pressing it downwards, displacing the adhesive in all four directionto ensure proper line level and uniform surface exposure to the adhesive.**
- **Each FLYASH BLOCK (AAC PROCESS) should be set in position by gently pressing with a small mallet hammer. Mortar should be applied on each contact side of the FLYASH BLOCK (AAC PROCESS) beforeplacing it on the leveled surface. Line/level should be checked continuously at all times.**
- **For the vertical joints, it is recommended to apply the mortar onto the vertical side prior of laying.**
- **When applying against a column, KON_CRETE mortar should be applied on both the surfaces. Any excess material should be cleaned immediately by using a trowel facing upwards to avoid wastage.**