

## **AUTOPAGE'S TECHNICAL GUIDE FOR BRICK PAVING**

### **FIRED CLAY PAVERS**

SABS 1575, the Standard Specification for Burnt Clay Paving Units (<sup>2</sup>), defines two classes of fired clay pavers, namely PA and PB. As the product specification is concerned only with the fitness for use of the products, guidance on application and usage is not given. Notably, the specification does not state that PA units are generally those designed for use in flexible paving, whilst PB units are generally intended to be laid in rigid paving. This generalisation should be viewed somewhat liberally, because there are many cases where the two classes can be used interchangeably. Table 1 indicates the most suitable applications of the two-paver classes. A full explanation of the design categories is given in Part Three.

In the preliminary selection of fired clay pavers, it is necessary to consider whether the manufacturer has specifically designated a particular product for use in paving. Paving is subjected to different and often more demanding stresses than masonry and purpose-made pavers are more likely to have been proven equal to these stresses, either by test or by experience, than a product which has been generally designed for walling.

### **APPEARANCE**

SABS 1575 is primarily concerned with specifying fired clay pavers to achieve adequate performance, although a common reason for choosing fired clay pavers also relates to their aesthetic appeal. Aspects such as colour and minor defects such as surface crazing and chips are thus of importance, but it is not practical and neither is it necessarily desirable, to attempt to stipulate these items in measurable form within a product specification such as SABS 1575. It is essential for aspects of paver appearance to be specified, it is suggested that at the time of ordering a fired clay paver, an agreement be made with the supplier as to the colour range, extent of minor defects etc, in the form of ten representative samples of the fired clay pavers. The samples can be retained by both the supplier and the purchaser and used by both parties to ensure that the pavers delivered meet the customer's expectations.

### **SHAPE**

The principle followed in the handbook is that the necessary interlocking of segmental paving units is a function of the joints between individual paving units within their patterned matrix. Fired clay pavers are mainly available in rectangular shape and if proper and effective joints are provided they can readily be used for all loading applications, although running bonds are not recommended where significant torsional loading is expected.

TABLE 1 - RECOMMENDED APPLICATION FOR PAVER CLASS

CLASS	TYPICAL APPLICATIONS (INDICATIVE ONLY)	TYPICAL METHOD OF CONSTRUCTION	DESIGN CATEGORY
PA	Hard landscaping, footpaths pedestrian areas, patios, pool surrounds, car parks, driveways to private houses, lorry parks petrol station forecourts, factory yard areas and residential roads.	Flexible paving in all bonding patterns.	Architectural & Residential
		Rigid paving in running and stack bond only.	Industrial & Commercial
PB	Hard landscaping, footpaths, pedestrian areas, patios, pool surrounds, car parks and driveways to private houses.	Flexible paving in all bonding patterns.	Architectural & Residential
		Rigid paving in all bonding patterns.	

Segmental fired clay units are sometimes provided with chamfers to the wearing surface. If provided they should not extend more than 7 mm from the nominal edge of the paver. Chamfers, although not essential, may be beneficial in:

- Reducing the incidence of chipping while handling;
- Easier handling whilst laying;
- Disguising any difference in surface level;
- Protecting joints from the removal of jointing material by wheel loads;
- Providing for rapid drainage of surface water;
- Emphasizing bond patterns.

Square edged units may be preferred in pedestrian areas where chamfered edges may present a hazard to narrow heels and trolley wheels. Their use is preferred in areas where noise from wheeled vehicles needs to be kept to a minimum. The essential element for effective flexible segmental paving has been shown in extensive studies to be the provision of proper and effective joints (3). Whilst the function of nibs is to reduce contact damage and assist with joint filling, they will not guarantee alignment during laying, as this is the function of both workmanship and size variation. There is a body of opinion against the use of nibs on any type of segmental paving because nibs can impair torsional and expansive movements.