

|                |                                                |
|----------------|------------------------------------------------|
| Grade:         | <b>SUPERTON AI44</b>                           |
| Product group: | FIRECLAY BRICKS OF INCREASED $Al_2O_3$ CONTENT |
| Application:   | Structural lining of heating units             |
| Remarks        | -                                              |

| Properties                                                     | Guaranteed          | Typical | Unit        | Standard       |
|----------------------------------------------------------------|---------------------|---------|-------------|----------------|
| Chemical composition                                           |                     |         |             | EN ISO 12677   |
|                                                                | $Al_2O_3$           | 42      | 44          | %              |
|                                                                | $Fe_2O_3$           | 2,30    | 2,10        | %              |
|                                                                | $SiO_2$             | -       | 50          | %              |
| Bulk density                                                   | 2,15                | 2,20    | $g/cm^3$    | PN EN 993-1    |
| Apparent porosity                                              | 22                  | 20      | %           | PN EN 993-1    |
| Cold crushing strength                                         | 25                  | 35      | $N/mm^2$    | PN EN 993-5    |
| Standard refractoriness                                        | -                   | -       | sP          | PN EN 993-12   |
| Refractoriness under the load $t_{0,5}$                        | -                   | 1300    | $^{\circ}C$ | PN-EN ISO 1893 |
| Refractoriness under the load $t_{0,6}$                        | -                   | 1430    | $^{\circ}C$ | PN-69/H-04178  |
| Thermal conductivity                                           |                     |         |             | PN EN 993-15   |
|                                                                | 800 $^{\circ}C$     | -       | 1,55        | W/mK           |
|                                                                | 1100 $^{\circ}C$    | -       | 1,65        | W/mK           |
|                                                                | 1400 $^{\circ}C$    | -       | -           | W/mK           |
| Linear thermal expansion                                       |                     |         |             | PN EN 993-19   |
|                                                                | 800 $^{\circ}C$     | -       | 0,40        | %              |
|                                                                | 1100 $^{\circ}C$    | -       | 0,60        | %              |
|                                                                | 1400 $^{\circ}C$    | -       | 0,80        | %              |
| Permanent Linear Change                                        |                     |         |             | PN EN 993-10   |
|                                                                | 1350 $^{\circ}C/2h$ | -       | +/- 0,2     | %              |
| Thermal shock resistance at 950 $^{\circ}C$<br>(water changes) | -                   | 20      | n           | DIN 51068-1    |

Typical values represent the average of results from the current production. Guaranteed values correspond to mean value due to p. 5.5 of ISO 5022 standard. All values are valid for mechanically-pressed, standard bricks of length  $\leq 250$  mm, width  $\leq 124$  mm and thickness 50-76 mm (NF1, NF2) and cannot be unconditionally transferred to other shapes (see corresponding sheet of Applicable Tolerances for Finished Products). Due to p.3.2.2 of ISO 5022 standard the properties which are the criteria of compliance assessment are limited to chemical composition and guaranteed physical properties. Properties may be subjected to fluctuations typical of the manufacturing process. PCO reserves the right to modify technical data sheet at any time without prior notice.