KUAN-HO REFRACTORIES INDUSTRY CORPORATION

HEAD OFFICE : NO.932, CHIEN FENG ROAD, TOUFEN MIAOLI TAIWAN R.O.C TEL: 886-37-542873-7 E-mail: krics@kric.com.tw

FAX: 886-37-541574 http://www.kric.com.tw



K09AG23

THE QUALITY OF HIGH ALUMINA BRICK-ORDINARY

The ordinary high alumina bricks are made of natural or synthetic high alumina materials such as diaspore, sillimanite, and alusite etc. and using clay as binder. Their refractoriness is high compared with fire clay and silica bricks. It does not easily vitrified at high temperature which benefits the service life of bricks. These bricks

contain about 50-75% Al₂O₃ and very low impurities. It might be characterized by their good resistance to oxides of alkaline earth and many other metals as well as the furnace slags. In case that fireclay or silica bricks can't fulfill the requirements, replace them with ordinary high alumina bricks, you can expect an improvement.

| Brand | | HA-7 | HA-6 | HA-5 | HA-4 |
|--|--|---------------------|-------------|-----------------|-----------------|
| Refractoriness(SK) | | >38 | >38 | >38 | >37 |
| Apparent Porosity(%) | | 19.0 | 18.4 | 20.0 | 21.0 |
| Bulk Density(g/cm ³) | | 2.85 | 2.82 | 2.50 | 2.45 |
| Cold Crushing Strength (kg f /cm ²) | | 800 | 760 | 500 | 700 |
| Refractoriness under load $(T_2^{\circ}C)$ Load:2kgf/cm ² | | >1550 | >1550 | >1500 | >1500 |
| Permanent Linear Change (%) 1500°C –2hrs | | -0.3 ~ $+0.8$ | -0.3 ~+0.8 | -0.6 ~ $+0.3$ | -0.6 ~ $+0.2$ |
| Thermal Expansion (%) at 1000°C | | < 0.8 | < 0.8 | < 0.7 | < 0.6 |
| Chemical Composition(%) | Al ₂ O ₃ Fe ₂ O ₃ | 82.0 1.6 | 80.0 1.6 | 70.0 1.8 | 60.0 1.8 |
| Characteristics | | Spalling resistance | _ | — | — |
| Main Application | | Ladle | Ladle | Various furnace | Various furnace |

Typical Properties

| Brand Properties | | HA-3 | HA-2 | HA-3D | HA-2D |
|--|--|-----------------|-----------------|---------------|---------------|
| Refractoriness(SK) | | >36 | >35 | >36 | >35 |
| Apparent Porosity(%) | | 18.0 | 17.0 | 16.5 | 16.0 |
| Bulk Density(g/cm ³) | | 2.35 | 2.35 | 2.44 | 2.40 |
| Cold Crushing Strength (kg f /cm ²) | | 510 | 450 | 655 | 670 |
| Refractoriness under load (T ₂ C)Load:2kgf/cm ² | | >1500 | >1450 | >1500 | >1470 |
| Permanent Linear Change (%) 1500°C –2hrs | | -0.6 ~ $+0.2$ | -0.6~+0.2 | -0.3 ~ $+0.2$ | -0.3 ~ $+0.2$ |
| Thermal Expansion (%) at 1000°C | | < 0.6 | < 0.6 | < 0.6 | < 0.6 |
| Chemical Composition(%) | Al ₂ O ₃ Fe ₂ O ₃ | 55.0 1.8 | 50.0 1.6 | 52.0 1.3 | 47.0 1.2 |
| Characteristics | | _ | — | High strength | High strength |
| Main Application | | Various furnace | Various furnace | Blast furnace | Blast furnace |

The average values are typical standard values which cannot be considered as binding specifications. All previously published technical data are replaced by the values stated herein and thus become invalid.