



WT KNOWLES & SONS LIMITED



## Fireclay and Fire Cement Data Sheet

### Fireclay

In order to satisfy a wide range of temperature applications, WT Knowles offers two solutions of heat resistant mortars suitable for use in the construction of a variety of high temperature enclosures such as open fires, ovens and barbeques for example.

#### Knowles Fireclay

Knowles fireclay is a 50% / 50% blend of Shelley Blue Shale Clay and Calder Sager Fire Clay which is ground to a 10 mesh (2mm) particle size.

It is available as a dry material in individual 25kg bags - Product Code KYI37D or in bulk - Product Code KYI38D.

Alternatively, it can be supplied pre-mixed with water as a Wet Moulder's (or Puddle) mix, either in individual 25kg bags – Product Code KYI37W or in bulk – Product Code KYI38W.

#### Using Knowles Fireclay

Prior to use, the fireclay should be mixed with Portland Cement in the ratio – 2 parts fireclay to one part cement. Dry fireclay should be mixed with water to achieve a consistency similar to peanut butter. Avoid making the mixture too wet but more water may be added if the mixture begins to dry out.

Application should be by trowel with a joint thickness between 1mm and 3mm.

The fireclay material is a grey colour but will change to a light terracotta colour after firing.

Curing the mortar to full strength will require a minimum temperature of 800°C for approximately 3 hours.

Knowles Fireclay is not recommended for use in the construction of pizza ovens or outdoor barbeques because the required minimum temperature of 800°C to cure the mortar to full strength will not be achieved in normal service.

For applications such as pizza ovens or outdoor barbeques, the use of Knowles Airset Fire Cement (Code KFC) is recommended.

#### Knowles Airset Fire Cement

This is a ready to use water based wet cement. The cement should be applied by trowel with a joint thickness between 1mm and 3mm (max). Being a water based product a little extra water may be added if required. This product will cure and set hard overnight without the application of heat.

The chemical analysis of Knowles Fire Cement is:

Silica(SiO <sub>2</sub> )	37.5%	Ferric trioxide(Fe <sub>2</sub> O <sub>3</sub> )	1.1%
Alumina(Al <sub>2</sub> O <sub>3</sub> )	56.2%	Maximum grain size	0.5mm

The fire cement is supplied in 25kg poly tubs and one tub will joint approximately 100 firebricks 215 x 114 x 76mm for example.

Knowles fire cement may be stored in cool, dry, frost-free conditions for up to 4 months. During transport the mortar may separate leaving a liquid layer on top.

This liquid should be mixed back into the mortar before use.



**Fire Clay**  
**Code: KYI37D**



**Airset Fire Cement**  
**Code: KFC**

### General

When lighting fires for the first time or following a long period of non-use, heat must be applied slowly

Prior to working with fireclay material, refer to *WT Knowles Material and Safety Data Sheets(MSDS) for Clay Products and the MSDS for Airset Fire Cement*

Full conditions of sale are shown in the main WT Knowles & Sons Limited price list.

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