Dyson Technical Ceramics™ isostatically pressed Zirconia Crucibles offer resistance to high temperatures, while maintaining excellent erosion resistance. This allows the caster to operate for longer, at higher temperatures, making Zirconia the preferred choice of crucible material for applications such as:

- Platinum/Platinum group metals
- Nickel based super alloys
- Cobalt based super alloys
- Uranium
- Sputter material for hard disk drives

The use of high purity raw materials and Dyson’s dedication to quality ensures our products perform well consistently. In addition to this Dyson’s efficient manufacturing techniques make sure our clients receive what they need, when needed.

In order to provide quality products Dyson™ delivers materials of the highest quality to the market, competitively priced and backed by the expertise of application knowledge and the resources of the Research & Development Laboratory in Sheffield.

Product development is both proactive and reactive in that new materials and technologies are constantly reviewed and where appropriate incorporated into the manufacturing facilities. Selection of materials is made by reference to an extensive application database, which, in conjunction with close liaison with end users, provides materials offering optimum performance in terms of cost and operation.

Dyson Technical Ceramics™ manufactures a wide range of crucibles based upon stabilised Zirconia. The properties of the finished product are determined by both the manufacturing method and the choice of the stabilising media.

Oxides of Calcia, Magnesia and Yttria are utilised as stabilising agents and each product is characterised by differing thermal properties.

Zirconia Crucibles, Key Features:
- Resistant to high temperatures
- Excellent erosion resistance
- Increased productivity
- Cleaner melts
- Ideal for the melting of Platinum/PGM
- Ideal for the melting of Nickel/Cobalt based super alloys.

ISO-Zirconia Product Range:
ISO-Zirconia M
High fired Magnesia stabilised, good thermal shock resistance and excellent erosion resistance. Mainly used in vacuum furnaces.

ISO-Zirconia C
Calcia stabilised, excellent thermal shock resistance, good erosion resistance. Used for air and vacuum melting.

ISO-Zirconia C2
High fired Calcia stabilised, good thermal shock resistance and good erosion resistance. Used for air and vacuum melting.

ISO-Zirconia Y
High fired Ytrria stabilised Zirconia, providing excellent thermal shock resistance.

Dypack-ZM Backing Material
- >90% ZrO₂ + HfO₂
- Designed to prevent sintering
- Excellent thermal insulator, resulting in longer crucible life, increased productivity for the caster and cleaner melts.

Dypack-Z Backing Material:
- 65% ZrO₂, 34% SiO₂
- Suitable for small installations
- Good thermal insulator
As Zirconia is an excellent insulator, Dyson™ recommends the use of Dypack-ZM™, Zirconia Backing Material. Dypack-ZM™ is graded to prevent sintering at temperatures in excess of 1650°C. Dypack-ZM™ consists of >90% ZrO₂ + HfO₂. The insulation properties of Zirconia ensure heat does not quickly dissipate from the crucible, leading to longer crucible life-spans and cleaner melts.

Alternatively, for smaller installations Dyson also recommends the use of our Zircon backing material - Dypack-ZM™.

![Illustration of Base Profiles](image_url)