

ZrO₂

ZIRCONIUM DIOXIDE

Application

ZrO₂ is a substance for the production of transparent optical films with high refractive index. ZrO₂ thin films are dielectric, hard and wear resistant combined with good oxidation resistance.

Purity

ZrO₂ > 99.9%

Suggested Evaporation Method

electron beam

Forms of Delivery

granules, tablets

Typical Analysis in wt%

ZrO ₂	99.99%
Al ₂ O ₃	< 0.002
As ₂ O ₃	< 0.002
C	< 0.010
CaO	< 0.002
CoO	< 0.002
Cr ₂ O ₃	< 0.002
CuO	< 0.002
Fe ₂ O ₃	< 0.005
HfO ₂	< 0.010
MgO	< 0.002
MnO	< 0.002
MoO ₃	< 0.002
Na ₂ O	< 0.002
Nb ₂ O ₅	< 0.005
NiO	< 0.002
P ₂ O ₅	< 0.002
PbO	< 0.002
SiO ₂	< 0.010
SnO ₂	< 0.002
Ta ₂ O ₅	< 0.002
TiO ₂	< 0.010
V ₂ O ₅	< 0.002
WO ₃	< 0.002
ZnO	< 0.002

Physical and optical properties

melting point: 2687 °C
 approx. evaporation temp. . . 2200 °C
 theoretical density: 5.56 g/cm³
 density supplied 4.2 g/cm³
 transparent region 300-11000 nm
 refractive index 1.9 - 2.3
 (depending on substrate temperature and wavelength)