Zirconium based products replace harmful chemicals and improve our lives

Healthier bodies
Non-toxic and longer lasting materials

False teeth and fillings
Zirconia replaces heavy metals for brighter, whiter and more hard wearing teeth.

Replacement joints
Zirconium alloys are used to make biocompatible, long lasting, hard wearing joints such as new ceramic knee and hip implants.

Products we rely on everyday
Zirconium chemicals are used in numerous applications including scratch proof coatings for glasses, antiperspirants, high-tech coatings on jet engines and 3D printing ink

Mobile phones and phone towers
Zirconium RF amplifiers are used to boost mobile signal strength and clarity.

Kidney dialysis
Zirconium chemicals are used to remove ammonia from kidney dialysis machines.

Paint
Zirconium chemicals replace lead as the drying agent in paints.

Water repellent fabrics
Zirconium based wax technology is used in outdoor clothing, tents and tarpaulins.

Jet engines
Zirconia ceramics provide diamond-like coating protection for jet turbines, allowing them to run hotter and cleaner.

Fire retardant fabrics
Zirconium based chemicals are used in wool and fabric dyes to increase fire retardation of fabrics.

Clean energy & lower emissions
Zirconium materials reducing our environmental impact

Fuel cells
The next generation of power are solid oxide fuel cells, providing clean, reliable and affordable portable power.

Catalytic converters
Catalytic converters in the exhausts of all modern cars contain approx 0.5kg of zirconia for increased performance and reduced exhaust emissions.

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Zirconium is a hard, grey-white metal with excellent corrosion resistance properties. Traditionally, it has been viewed as a valuable by-product of titania mineral sands operations.

Zirconium materials may be classified into three broad categories: fused zirconia, zirconium chemicals and chemical zirconia. Zirconium metal is produced from either fused zirconia or zirconium chemicals.

No, zirconia is known to occur naturally in a mineable form in very few places in the world. Currently a mine in Russia produces a small amount of zirconia (3% of world output) from a mineral called baddelyte, which is mined as a by-product of titanium mining.

The remaining 97% is currently produced in processing facilities using zircon (commonly found in mineral sands), rather than being mined from the ground. The DZP site contains no zircon or naturally occurring zirconia.

The DZP’s zirconia will be produced from an ore mined at the site containing eudialyte (comprised of zirconium cyclosilicate hosting calcium, water, yttrium, and heavy rare earths). This ore will undergo a series of chemical processes in the treatment plant to produce zirconia.

Zirconia is a stable, non-reactive, non-toxic, non-radioactive material that is used in a wide range of applications.

The Dubbo Zirconia Project will produce four main products (in order of volume); zirconia, light rare earths, niobium and heavy rare earths.

Operating costs are estimated at A$200-250Mpa.

*A$US$ 0.75