

Muchea Silica Sand Project



Laying the foundations for a sustainable silica sand products manufacturing industry in WA

A world-class resource

VRX Silica Limited, a Perth-based ASX listed company, is developing the high-grade, long-life Muchea Silica Sand Project 50km north-east of Perth; as well as other silica sand projects in the Mid West. VRX is pursuing the establishment of a glass-making facility in Western Australia to produce specialist glass for use in solar panels, LCD screens and other high-tech products. This globally scarce silica resource will support the establishment of new local downstream industries, which will trigger significant investment and job creation.



Downstream processing

 Muchea is one of the few world-class silica sand projects with an outstanding grade of +99.9% silica dioxide (SiO₂). This level of purity is needed to meet demand in the booming ultra clear, solar panel flat glass industry. Once operational, Muchea will open up the Gingin-Muchea communities to a new mining and manufacturing export opportunity for more than 25 years.



Proximity to high-quality silica, reliable energy and infrastructure

The manufacture of solar panel flat glass requires two key inputs: a reliable energy source and high-purity silica sand. Muchea is located close to gas pipelines, the proposed Mid West renewable energy hub, rail access and major road corridor Brand Highway. VRX is also exploring the use of hydrogen and renewable energy to power Muchea once operational.



Silica sand is a critical raw material for more than 800 everyday products



Filtration

- Food and beverage
- Pharmaceutical
- Biofuels



Glass

- · Solar panel flat glass
- Automotive glass
- Smartphones and tablets
- Fibreglass
- Container glass



Building products

- Cement
- · Grouts and mortar
- Quartz countertops



Additives/fillers/ extenders

- Cosmetics
- · Paper and plastics
- Paints and coatings
- · Rubber & epoxies



Chemicals

- · Silica-based chemicals
- Ceramics
- Sodium silicates
- Silicon carbide



Absorbents

- Automotive
- Accidents and spills
- Pet litter



Pool/recreation

- · Golf sand
- Pool filtration
- Sports fields



Other uses

- · Foundry sand
- Forensic testing
- Wind turbine blades

Critical to the global decarbonisation effort



Ultra-high purity, low-iron silica sand is a key component in

- Solar panel glass
- · Fibreglass composite



Solar panel flat glass

• Ultra high-grade, low-iron silica sand is needed to produce glass that effectively transmits the sun's energy to solar panel cells



Wind turbine blades

Specialty silica sand is a critical component in the fibreglass used for wind turbine blades



Lower auto emissions

Ground silica sand is used to produce particulate filters for both petrol and diesel engines



Clean-burning diesel

 Silica sand is a key processing aid in the production of green diesel



Feeding the planet

• Silica sand is a crucial component for bleaching clay absorbents and filter aids needed to meet stringent food safety requirements

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