

Bunbury Operations

Kemerton Plant	Australind Plant
869 Marriott Road	Lot 350 Old Coast Road
Kemerton Industrial Park	Australind
Australia	Australia



The Bunbury Operations incorporate two facilities – Kemerton and Australind – that produce titanium dioxide (TiO₂) for Cristal. We are the world’s second-largest producer of TiO₂, a bright white powder made from titanium ore that has the ability to pigment virtually any material. TiO₂ makes possible the opacity, brightness and durability in paint formulas that have made modern paints more cost efficient, easier to use and friendlier to the environment. TiO₂ also gives plastics and rubber opacity and whiteness. It is used in such diverse products as printing inks, paper, ceramics, glass, leather, synthetic fibers and colors formulated for art paints.

The Kemerton plant is in the Kemerton Industrial Park, 24 km north of Bunbury in Western Australia. The plant occupies a 55-hectare site that it shares with satellite plants supplying raw materials such as chlorine, caustic soda, gaseous oxygen and nitrogen. The plant produces TiO₂ through the chloride process, which uses chlorine to react with titanium-bearing ores.

The TiO₂ base pigment from Kemerton is transported by truck as a water-based slurry to the Australind finishing plant 10 km north of Bunbury. Here it is surface treated, dried and milled to a uniform fine white powder. Finished product is then packaged in 25 kg, 500 kg and 1000 kg packs and distributed to our customers by rail or sea from warehouse facilities at the port of Fremantle, 150 km north of Bunbury. A technical services facility at Australind is equipped with laboratories, equipment and technical expert staff to support the use and application of the products produced by the Bunbury Operations.

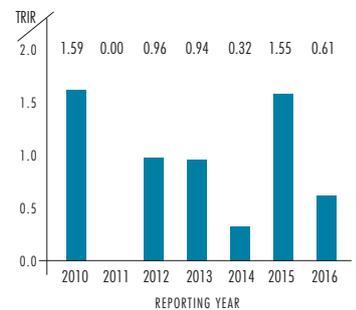
PERFORMANCE SUMMARY

Bunbury’s commitment to sustainable growth balances the company’s responsibility to provide economic value while respecting the social concerns of the community in which we operate and demonstrating care for the environment.

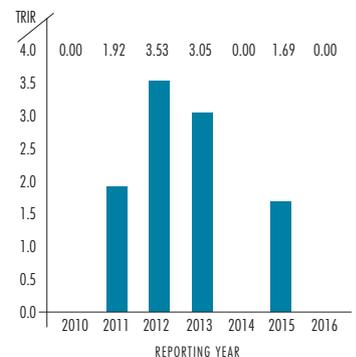
PROVIDING ECONOMIC VALUE

- Approximately 340 employees and contractors
- Annual payroll and benefits of almost \$A40 million
- Site purchases more than \$A235 million of goods and services annually

Employee–Total Recordable Incident Rate (TRIR)
Rate of injuries per 100 employees



Contractor–Total Recordable Incident Rate (TRIR)



RESPECTING SOCIAL CONCERNS

We recognize that being a socially responsible member of the community requires maintaining an open door for community dialogue and actively working to support community needs.

- **Community Involvement** – We actively encourage community interest in our operations, hosting school and community group tours of the Australind and Kemerton plants. Open Days provide nearby residents with an opportunity to come on site and view our facilities. We meet regularly with our neighbours including the Shire of Harvey, City of Bunbury, Shire of Dardanup, and the Shire of Capel to maintain open and regular dialogue. We also participate in the Kemerton Industrial Park Coordinating Committee.
- **Education** – There has been a formal relationship with the Australind Senior High School since 1990 and Dalyellup Beach Primary School since 2005. The company provides annual awards and incentives to students to encourage excellence in performance. A number of projects link our organisations for the betterment of the community.
- **Employee Involvement** – Employees participate in a range of community activities including coaching, sporting teams and community tree-planting events. Other employees are active in schools sharing information about our plant and its products.
- **Community Support and Sponsorship** – The company makes regular contributions to a wide range of local community groups for sporting, environmental, cultural, community at risk and educational activities. There is a strong focus in education for our future which is supported through Memo Of Understanding's with local primary and secondary schools.

CARING FOR THE ENVIRONMENT

Our commitment as a socially responsible company means that we operate our facilities in a manner that protects people and the environment and preserves the world for future generations. We are committed to continuous improvement in safety, environmental performance, reliability and open communication.

- **Safety Performance** – A behavioural safety program, BOOST, was initiated in 2002 and continues to be strongly utilised by our workforce to this day. This program has been a key initiative in ensuring our safety performance regularly exceeds the industry average.
- **Prevention** – The site has a program in place to ensure the safe operation and maintenance of our processes and that accidental releases are prevented. The Kemerton Plant's safety case has been approved by the State Government's Regulator for Major Hazard Facilities.
- **Environmental Performance** – The company aims to add value to raw materials without creating an undue environmental impact. Our operations achieved a 50% reduction in CO₂ equivalent emissions per tonne of TiO₂ since 1990. Our operations comply with the ISO14001 standard. Community Involvement has seen the restoration of Kemerton wetlands and land along the Collie River. The company recognises that water is a valuable resource and continues to make steady improvements in water usage, water extraction and water efficiency at both sites.
- **Waste Minimization and Reduction** – Titanium dioxide yield continues at historically high levels.
- **Energy Efficiency** – Since 2000 the energy required to produce a tonne of TiO₂ has been reduced by 25%.
- **Land Restoration** – Our fully-utilised waste disposal facility at Dalyellup will be resorted to coastal dunal vegetation. The rehabilitation program will commence in 2018.

Cristal is one of the largest producers of titanium dioxide and a leading producer of titanium chemicals. Cristal is the world's leading supplier of ultrafine titanium dioxide products and titanium chemicals and is a fast-growing producer of mineral sands and titanium metal powder. Cristal operates eight manufacturing plants in seven countries on five continents and employs nearly 3,400 people worldwide.

Visit www.cristal.com for more information about the company and its products.

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