



Kinder Australia Product:

K-Superskirt® Engineered Polyurethane

Product Category:

Skirting & Sealing

Location:

Northern Territory

Conveyed Materials:

Bauxite

K-Superskirt®: 300% Longer Life, \$2M Saved Annually in Downtime.

OVERVIEW

The customer is a large-scale Tier 1 bauxite producer in the Northern Territory, operating a high-throughput mining and processing facility recognised internationally for its size and operational complexity.

With relentless material volumes and strict expectations around reliability, the site demands technologies that can withstand extreme wear, reduce exposure to repetitive maintenance, and deliver measurable, long-term cost reductions.

CHALLENGE

The operation was facing a costly and unsustainable cycle of premature conveyor belt failure driven by heavy top cover wear in the skirt line of the belt - at times up to 3mm of belt thickness loss in a matter of weeks. Conveyor belts were being replaced every six months—at a staggering \$600K per changeout—while actual belt life fluctuated wildly from 20 to 36 weeks.

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- Excessive skirt wear causes belt changeouts every 6 months at \$600K each.
- Belt life varies 20-36 weeks, making shutdown planning unreliable.
- Soft skirt failures cause frequent outages and high spillage.
- Safety risks: elevated Critical Risk exposure from frequent changeouts and regular soft skirt replacements, along with repetitive manual cleaning of the transfer point.



SOLUTION

The site deployed **K-Superskirt® Engineered Polyurethane**, a purpose-built, high-performance skirting system designed to deliver superior sealing pressure and extreme durability. Unlike conventional rubber skirting, K-Superskirt® does not harden, crack, or groove the conveyor belt. Its engineered polyurethane composition delivers outstanding abrasion resistance and maintains a consistent, reliable seal throughout its life.

By controlling dust, eliminating build-up, and dramatically reducing skirt wear, K-Superskirt® immediately broke the ongoing cycle of reactive maintenance. With up to 10× the life of rubber and 3–5× the life of standard polyurethane, the system provided a high-confidence, long-term solution capable of withstanding the brutal conditions of high-volume bauxite production.



RESULTS

- 300% belt life extension with consistent, predictable wear rates.
- Cost savings of ~\$100K per month from fewer high-cost belt replacements.
- Reduced maintenance and operating costs through few skirt replacements.
- Eliminated downtime, saving ~\$2M per year.

The impact was immediate and transformative. **Belt life increased by more than 300%**, providing stability and predictability that had never previously been achievable.

This uplift translated to approximately \$100K in savings for every additional month of belt life due to fewer high-cost replacements.

Downtime linked to soft skirt failures was completely eliminated, unlocking an estimated \$2 million in annual savings.

Maintenance crews were freed from repetitive skirt changeouts and excessive clean-up work, allowing resources to be redirected to higher-value tasks.

The success of K-Superskirt® enabled the site to roll out a consistent, scalable skirting strategy, challenging long-held industry norms and setting a new operational benchmark for skirting performance.



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