

ACTIVE VCI CORROSION PROTECTION TECHNOLOGY

DAYWALK eVCI

The active alternative to passive technologies

eVCI is Daywalk's preservation technology — an active Volatile Corrosion Inhibitor (VCI) system packaged into films, powders, oils, gels and other coatings and solutions.

It protects metal equipment, parts and machinery during storage and transport — reaching recesses and cavities that passive barriers can't cover.

KEY BENEFITS



ENVIRONMENTALLY FRIENDLY

Fully recyclable and requires only half the film compared to other anti-corrosion technologies.



ECONOMICAL

Competitively priced and effective with only one layer of film for both UV and rust resistance.



EFFECTIVE

Proven protection in multiple mediums — and included in the BHP specification as a suitable preservation method.

WHY eVCI OUTPERFORMS COPPER

TEST RESULT COMPARISON

Originally employing Reactive Copper Technology, the company compared this option with Daywalk's Volatile Corrosion Inhibitor (eVCI) solution, to see whether the eVCI technology represented an effective alternative to protect its components.

The company tested the preservation methods on two C175 engine lifting pins.

One was wrapped in a copper film.

One was wrapped in UV-VCI film.

Parameters

- The test was conducted over six weeks.
- Components were exposed to high humidity and rain on outdoor pallet racking.
- An incision was made to both wrappings after four weeks to simulate real-world damage.

RESULTS

After six weeks, the company unwrapped and compared the components.

A sample gear – with no rust protection – experienced severe corrosion over the same period and under the same conditions. The Reactive Copper Technology also didn't fully prevent corrosion, with marked rust on the pin.

eVCI technology showed superior performance – with zero rust. The vendor noted that it was a "great result for the Daywalk product".

HOW DOES eVCI WORK?

Think of it like a protective invisible force field for metal parts. The bag or wrap is infused with a special agent that constantly gives off a fine, protective vapour inside the sealed package.

That vapour spreads into every nook and cranny of the part — even places you can't spray or wipe — and forms a super-thin shield on the metal that keeps moisture and oxygen from causing rust.

It's not a liquid or coating you apply. It just works automatically as long as the item stays wrapped, with no oily residue to clean off before use.

WHY eVCI OUTPERFORMS ALTERNATIVES

1. Reaches where copper can't. VCI vapour actively migrates to internal, recessed and enclosed surfaces that passive copper technology cannot fully cover.
2. Less waste, less labour. No need for a double wrap (UV stability layer + separate copper film), cutting single-use plastics and the overall waste profile.
3. Built for the Pilbara. German-engineered technology, calibrated for Pilbara conditions and UV exposure.
4. Proven and specified. Independently tested corrosion inhibition performance, and included in BHP's standard MECOE.BLD.0012.

SPECIFICATIONS

Technology	eVCI — Volatile Corrosion Inhibitor, active vapour-phase protection
Format	Heat-shrink film / reusable covers, powders, oils and gels
UV options	Clear or White UV Block
Coverage	Encapsulates internal & external surfaces without direct contact
UV performance	UV stabilised for rugged Pilbara outdoor conditions
Sustainability	100% recyclable; single-layer design reduces plastic use
Endorsement	Included in BHP standard MECOE.BLD.0012

DAYWALK eVCI HIGHLIGHTS

- German preservation technology, Pilbara-calibrated
- Active vapour reaches recesses copper can't cover
- Only one layer needed for UV + corrosion resistance
- 100% recyclable, low plastics footprint
- Included in BHP standard MECOE.BLD.0012

eVCI IN USE



eVCI film applied to a complex component profile



Long-profile steel bundles fully encapsulated in eVCI film



Crane-lifting a fully eVCI-wrapped motor onto a Daywalk Transporta frame



Long-term outdoor storage — eVCI wrap holding up in an exposed mine site yard



Liebherr components individually eVCI-wrapped and racked for transit



eVCI film after extended outdoor exposure — still fully sealed and legible

Further reading: [Comparing Asset Preservation Methods — daywalk.com/case-study/comparing-asset-preservation-methods](https://daywalk.com/case-study/comparing-asset-preservation-methods)