



Combining high shear and low tensile strength, Lock n' Pop offers the unique ability to break the bonds of palletised loads without disrupting the packaging surface.

Holding it together with Lock n' Pop

When it comes to effective palletising, stretch film and hood wrapping are today's norm, with film having the key advantage of being able to contain loads regardless of surface structure or dimension. Now, however, enter the era of sustainable packaging and film's hegemony is being challenged by old adhesive technology, as BRENDA NEALL reports.

LOCK n' Pop is one of those old technologies that finds itself in an interesting place today; riding a wave of retro popularity in packaging and logistics worlds that are trying their best to improve efficiencies, cut costs and clean up their excesses.

Lock n' Pop, an adhesive-based palletising solution, has been around for over 30 years. It arrived in the 1970s as the concept of palletised shipping was coming into its own. With increased coefficient of friction (COF) no longer sufficient to hold loads together, bonding the surfaces of the packages together to prevent movement was starting to catch on. But standard adhesives were problematic as they typically resulted in torn packages or unsightly residue.

Lock n' Pop (then known as Key Tech Corp) entered this arena with innovative solutions. Using the concept of high shear and low tensile strength, the ability to break bonds without disrupting the packaging surface became the central core of its product development.

However, its arrival coincided with the entry of stretch wrap. In those early years, Lock n' Pop enjoyed a market lead over what was then the costly alternative of stretch equipment and consumables, but as film became cheaper, wrapping became a more conventional method of unitising and remains so today.

Rolling on to the Noughties and the dawning of an era that has sustainability as the new packaging mantra, Key Tech Corp has reinvented itself as the more catchy Lock n' Pop and growing customer demand has put it on a major comeback trail. However, as the company stresses, it has not had to make over its main offering in keeping with the times: it was already ahead of the game as a very earth-friendly material.

Water-based and composed primarily of plant-derived polymers, this green ethos has always been part of the company's direction, notes stalwart corporate spokesman, Rosanna Cavanaugh.

'From early days, Lock n' Pop took into account product composition as part of an environmental solution for pallet load stabilisation and reducing packaging waste. It's more than just green "feel good" – we were doing life cycle

analysis (LCA) as part of development ten years before it became standard practice,' she says.

Some of Lock n' Pop products have had to be reformulated, notably those developed from solvents and used to keep poly film bags neatly stacked, and those designed for use for freezing applications which included petrochemical glycols. These have been eliminated by new formulas because they were 'not in keeping with the basic premise that Lock n' Pop products should be directly in line with environmental ethics', to quote Rosanna.

All its adhesive formulas now use sustainable materials that meet requirements for being non-hazardous, biodegradable, repulpable, and compostable. For the future, Lock n' Pop has products composed of 'food-grade' materials, ie those that can be ingested without harm, on its drawing board.

About Baypac

ESTABLISHED in 1987 in Port Elizabeth as a supplier of general packaging materials such as tape, strapping, stretch film, vacuum-formed food containers, injection-moulded bins and crates, Baypac has marketing rights for specialised products, including Lock n' Pop and volatile corrosion inhibitor packaging from Excor in Germany. Baypac also represents CKDPACK, a Canadian company supplying returnable packaging solutions; and Ventureshield, a US supplier of clear film for protection of vehicles from stone chips.

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Lock n' Pop in South Africa

This green palletising solution has been available in South Africa for three years through sole agent, Port Elizabeth-based Baypac. Company co-owner, Dave Louw, reports interest has 'grown tremendously' and, from a zero base, there are now 24 local adoptees, and it's being applied across several industries, from fertiliser to frozen food.

'It's a remarkable and exciting product and perfect for the times,' comments Dave. 'Any company using stretch wrap or hot melt to secure palletised boxes or bags should at least have a look at Lock n' Pop. It's stronger than stretch wrap alone and safer than hot melt, better for packages, the environment and, most importantly in this country, it's better for the bottom line.'



Baypac demonstrated Lock n' Pop at last year's Propak Africa. Seen here are Baypac's Gordon Upton with Klaus Hahnebeck (Cape Town agent).

Unlocking Lock n' Pop

A range of water-based, environmentally-friendly adhesives that:

- Locks one container to another, holding pallets together from the inside out.
- Prevents side-to-side shifting common in intermodal shipping – because of its shear strength.
- Easily 'pops' apart by lifting – because of low tensile strength.
- Is applied safely, without heat.
- Uses compact, inexpensive, nearly maintenance-free equipment.
- Does not tear packages nor damage graphics.
- Leaves no visible or sticky residue.
- Eliminates stretch wrap waste and dunnage.
- Is non-toxic and recyclable.
- Costs just cents per pallet.
- Works on all packaging types: boxes, bags, frozen and chilled packaging.
- Uses less stretch wrap or none at all.
- Eliminates shipping damage, along with the high cost of re-palletising and replacing goods.

Will Lock n' Pop ever replace palletising materials? No, says Dave, but the goal is to eliminate materials wherever possible, reducing the amount of tertiary packaging used, and with a return on investment for application equipment in less than one year.

'Lock n' Pop views itself as a small company with a large job,' he adds. 'They assist many companies, among them some of the largest processors in the world, to ship loads safely while minimising the use of extraneous materials that are costly to buy and costly to dispose of, such as stretch wrap, tier sheets, corner boards and other dunnage. I'm biased, of course, but Lock n' Pop represents one of the soundest sustainable solutions in the world of packaging and shipping today.'

Lock n' Pop meets Wal-Mart 'Seven Rs'

WAL-MART Stores' much-publicised sustainable packaging 'scorecard' – intended to help it meet a commitment of reducing packaging across its global supply chain by 5% by 2013 – comprises a list of favourable attributes known as the 'Seven Rs of Packaging': Remove, Reduce, Reuse, Recycle, Renew, Revenue and Read.

Here's how Lock n' Pop says it scores:

#1 – Remove Packaging: It removes stretch wrap film, tier sheets, corner boards, banding, and dunnage. It allows secure transport using minimal amounts of tertiary packaging.

#2 – Reduce Packaging: By using Lock n' Pop for load unitisation, stretch film consumption can typically be reduced by 30% to 100%. Reduction is based on a number of variables which require detailed review. Tier sheets can typically be reduced from multiple corrugated or chipboard sheets to one kraft paper sheet. Bonding the bottom tier to the pallet eliminates the need for extra wrap used to secure load to deck.

#3 – Reuse Packaging: Lock n' Pop becomes part of the surface of the package. Uniquely, it leaves virtually no trace of its presence, no tacky feel, and no unsightly residue. Because of this attribute, Lock n' Pop will not impair the ability to reuse any packaging.

#4 – Renew(able): Standard Lock n' Pop products are made of renewable plant materials, not petroleum. All products are water-based with FDA 175.105 approved ingredients for indirect food contact, and the standard products are free of VOCs.

#5 – Recycle(able): Lock n' Pop becomes part of the packaging surface, it does not interfere with the paper repulping process. Unlike hot melt or PSAs, Lock n' Pop does not create 'stickies' which require special separation and disposal. Materials dissolve effortlessly in water.

#6 – Revenue: Thanks to efficiencies that are added in the end-of-line operations such as reduced wrapping time, maintenance and replenishment times, total applied cost is lower and ROI very favourable. Unlike hot melt adhesives, Lock n' Pop is applied cold and uses minimal energy.

#7 – Read: For additional information, visit www.locknpop.com.



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