

Envirotuff Liner (ETL)

Protection That Travels With Your Product

Envirotuff Liner™

Because What You Ship Isn't Meant to Change



**San Miguel Yamamura
Woven Products Sdn. Bhd.**



The Problem: Your Container Is a Heat Trap

Standard shipping containers offer zero thermal protection. On tropical or long-haul routes, internal temperatures can soar far beyond safe limits — creating conditions that silently destroy product value.



Extreme Heat Build-Up

Container interiors routinely exceed ambient temperatures on sun-exposed routes.



Condensation Damage

Temperature swings trigger moisture build-up, threatening packaging and product integrity.



Product Degradation

Uncontrolled heat accelerates spoilage, reduces shelf life, and leads to costly rejections.

What Is the Envirotuff Liner?



A Thermal Insulation Liner System

ETL is installed directly inside a standard shipping container — converting it into a **passive controlled environment** without refrigeration infrastructure.

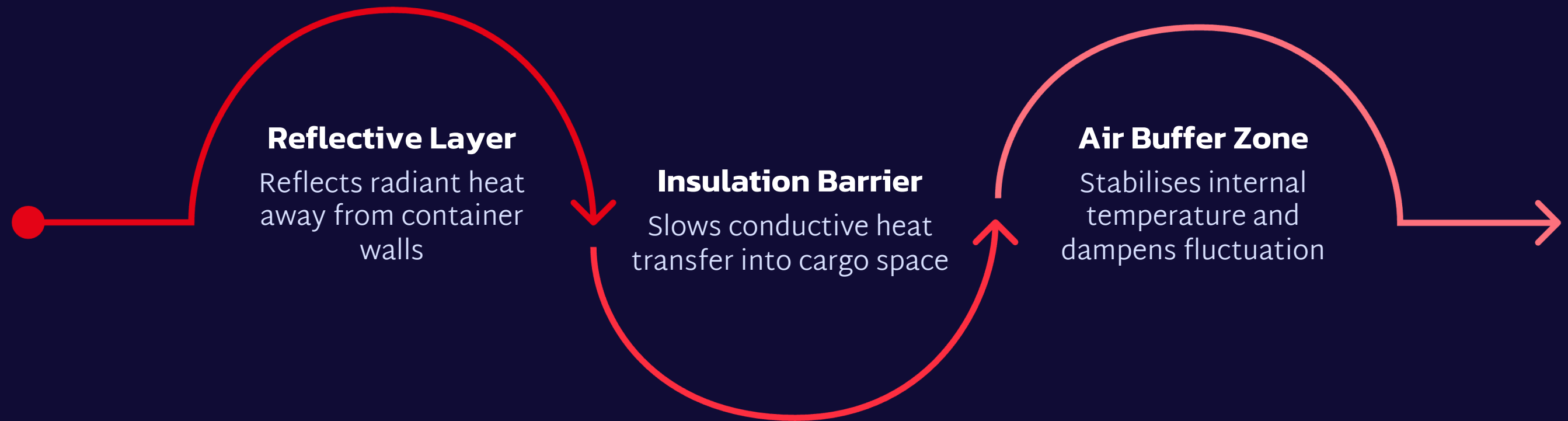
Engineered to:

- **Reflect** radiant heat away from cargo
- **Reduce** temperature fluctuation throughout transit
- **Protect** cargo quality from origin to destination



No power source required. No refrigeration unit. Just reliable passive thermal protection.

How ETL Works: Three Key Mechanisms



Together, these three mechanisms work passively to reduce peak temperatures, dampen fluctuation, and preserve the internal environment — without any power source or refrigeration unit.

ETL vs. No Liner: A Clear Difference

Aspect	Without ETL	With ETL
Temperature	High fluctuation	Stabilised
Product Quality	At risk	Preserved
Moisture / Condensation	Uncontrolled risk	Controlled
Claims Likelihood	High	Significantly reduced
Delivery Reliability	Inconsistent	Consistent



If the cargo matters, protection is not optional — it is a commercial necessity.

ETL Product Range

Three variants designed to match different cargo profiles and sustainability requirements.

Standard Thermal Liner

Core insulation performance for general temperature-sensitive cargo



Breathable ETL (B-ETL)

Allows controlled airflow to minimise condensation risk — ideal for produce and hygroscopic goods



Fully Recyclable ETL (Eco-ETL)

Fully recyclable liner to meet and comply with corporate sustainability and ESG commitments



Who Uses ETL?

ETL is trusted across industries where temperature sensitivity directly impacts product value and customer acceptance.



Wine & Beverage



Palm Oil Derivatives



Specialty Resins



Pharmaceuticals & Healthcare



Electronics, Electrical & Semiconductor



Food Ingredients



Chemicals



Automotive Parts



Plastics Resins & Polymers



Adhesives, Sealants & Coatings

Operational Features: Built for Real-World Use

Designed for On-Site Efficiency

ETL is engineered for **practical deployment** — not just performance in theory. Your loading teams can install and close a liner without specialist training or additional equipment.

→ **Fast, Easy Installation**

Sliding hook system enables quick fitting by standard warehouse staff.

→ **Secure Closure**

Zipper closure system keeps the liner sealed throughout transit.

→ **Forklift-Friendly**

Handling and positioning designed to be compatible with standard forklift operations.

The Commercial Case for ETL

Risk Without ETL

Product Rejection & Spoilage

Goods arrives damaged or out of spec, caused costly return

Customer Claims & Penalties

Financial liability and strained commercial relationships.

Brand Credibility

Repeated failures erode long-term customer confidence.

The Simple Reality

The cost of one rejected shipment can exceed the cost of ETL protection across multiple containers.

ETL is not an added cost — it is **cost avoidance and margin protection**.

- Controlled temperature risk
- Reduced damage probability
- Minimal incremental cost per container



Proposed Pilot Approach

A low-commitment, data-driven validation of ETL performance on your own routes and cargo.

Step 1

Select a Shipment

Identify temperature-sensitive cargo on a typical high-risk route.

Step 2

Controlled Comparison

Run one container with ETL alongside one without — same route, same cargo type.

Step 3

Measure & Validate

Assess temperature data, product condition on arrival, and customer acceptance rate.



**Minimal upfront commitment . Real performance data .
A fully informed, risk-free decision.**