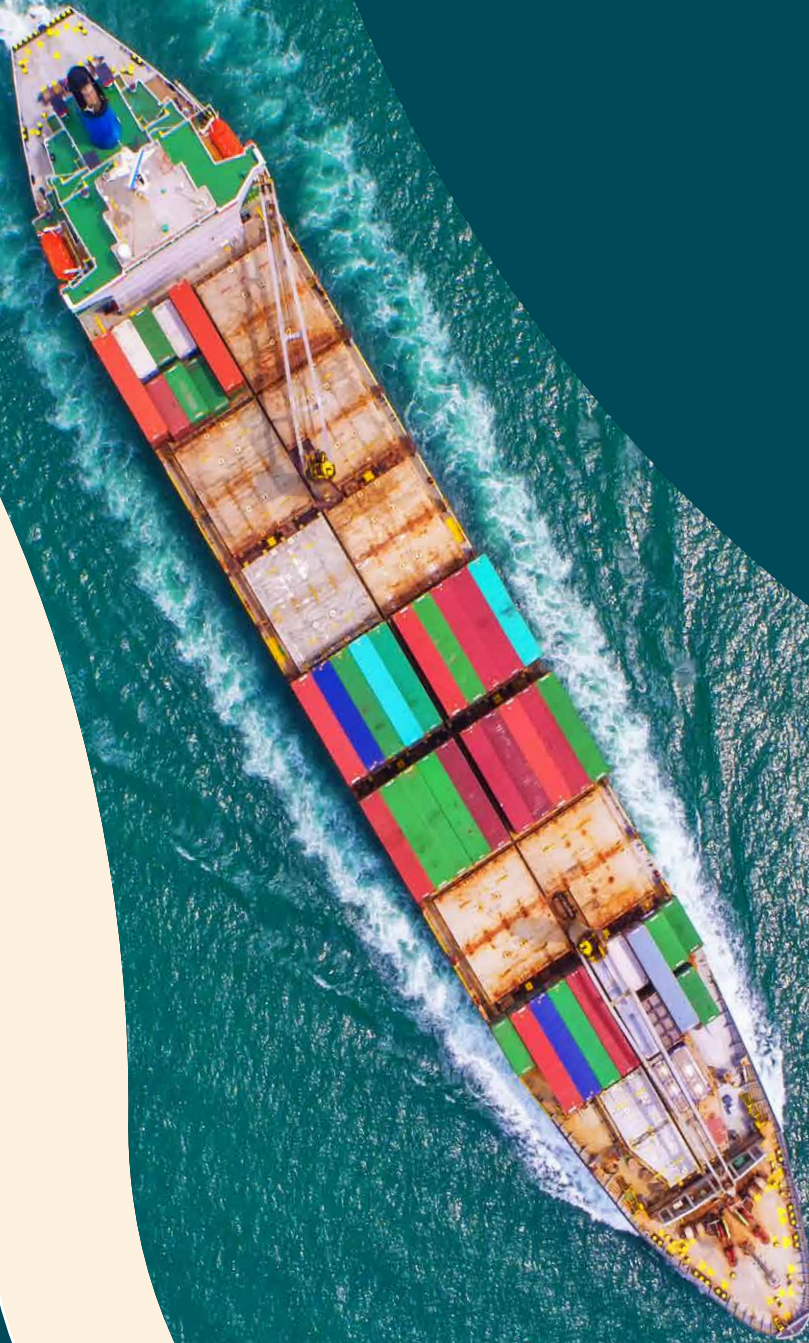


VirdiStarb

Cargo



What is **VirdiSorb™** *and why is it* **Revolutionary?**

Why choose VirdiSorb™?

- Locks in moisture - **zero leaks**, zero mess.
- Absorbs **over 200%** of its own weight.
- Effective in **all temperatures & humidities**.
- Odour-free, safe to handle, easy to apply.
- **Reliable protection** for all shipping & storage needs.

Traditional desiccants like silica gel and calcium chloride struggle with **leakage, short lifespan, and inconsistent absorption**, leading to moisture damage during transit. **VirdiSorb™ is the world's first hyperdesiccant™**, offering breakthrough moisture control with no leaks, no re-release, and long-lasting protection.

Its patented formula absorbs **over 200% of its weight in moisture**, safely locking it away **without mess or corrosion**. Designed for global shipping, VirdiSorb™ works across -5°C to 60°C, lasts up to 12 weeks, and **adapts to changing humidity conditions**, ensuring cargo stays dry and secure.



For Great Performance, Longevity & Leak-Free Protection

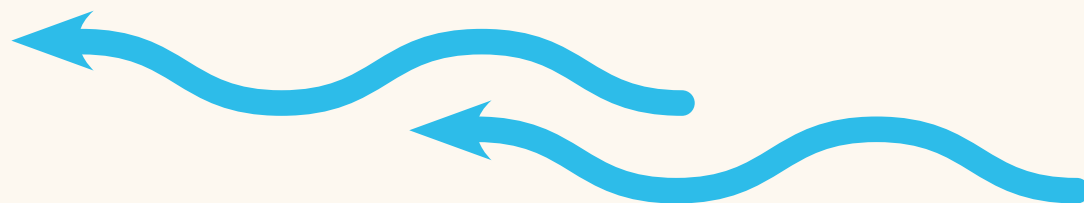


Examples of container rain caused by a failed calcium chloride desiccant. The burst sachet is shown to the right.

Container rain occurs when moisture inside a shipping container condenses due to temperature fluctuations. As cargo travels through different climates, the warm air inside the container can hold humidity. When temperatures drop, especially at night or in colder regions, the **moisture condenses on the container's ceiling and walls**. Eventually, this condensation forms water droplets that can fall onto the cargo, potentially **causing damage such as mould, corrosion, and deterioration of packaging**.

Traditional desiccants often fail under prolonged humidity exposure, leaking, breaking down, or re-releasing moisture, which can cause serious cargo damage, corrosion, and contamination. **VirdiSorb™ changes the game.**

The patented hyperdesiccant™ formula is specifically engineered to absorb 200% of its own weight in moisture while **permanently locking water away**. Unlike standard desiccants that form unstable pastes or liquids, VirdiSorb™ solidifies absorbed moisture into a cement-like structure, **eliminating the risk of burst failures or leakage**.



Protection where and when it matters.



VirdiSorb™

beats the Competition

Moisture damage impacts your products and reputation while consuming time managing complaints. VirdiSorb™ reduces desiccant usage by up to 90%, **minimising damage issues** and allowing you to focus on effective solutions. By using less, you can **streamline storage** and transportation, creating more space for your products and **reducing waste**. Experience enhanced **efficiency at every stage**.



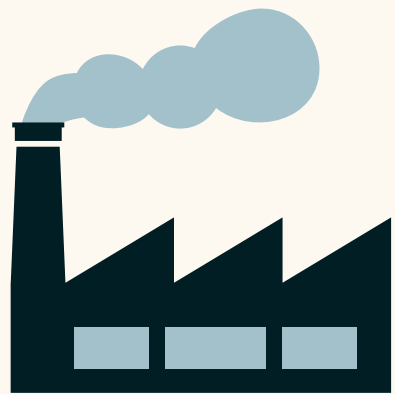
	VirdiSorb™	Silica Gel	Clay	Calcium Chloride
Protects your product for up to 12 weeks	✓	✗	✗	✗
Protects over a wide range of temperatures	✓	✗	✗	✓
Protects at all humidity levels	✓	✗	✗	✓
No leaking	✓	✓	✓	✗
No risk of damage from corrosive liquid	✓	✓	✓	✗
No re-release of absorbed moisture	✓	✗	✗	✗
Powerful absorption capacity	✓	✗	✗	✓
Use fewer sachets per trip	✓	✗	✗	✓
Suitable for shipping containers	✓	✓	✗	✓
Suitable for large packaging such as pallets	✓	✓	✗	✓
Suitable for enclosed boxes	✓	✓	✓	✓
Expert advice	✓	✗	✗	✗
Cargo tracking and monitoring facility	✓	✗	✗	✗

Environmental *Impact*

“ViridiSorb eliminated our corrosion problems, and we use much less than before”

- British Steel

Silica Gel



Silica gel requires a multi-step manufacturing process that consumes **significant heat and water**, leading to a substantial carbon footprint. Once used, it's rarely recycled, often ending up in landfills or oceans where it does not break down.

Since it absorbs less moisture per gram, **larger quantities are needed to perform the same job**, meaning more production, more waste, and more environmental burden.

Clay Desiccants



Although clay is a naturally sourced material, its environmental footprint tells a different story because the mining and **drying processes are energy-intensive**.

Since clay has limited absorption capacity, **larger volumes are needed, increasing storage, transport, and disposal impact**.

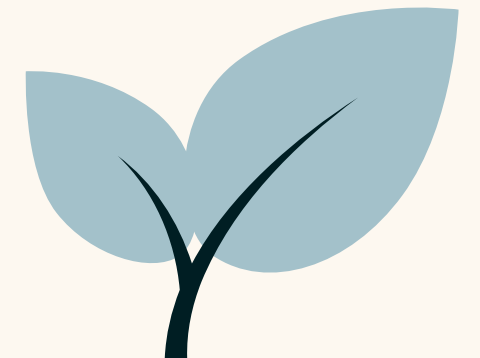
Calcium Chloride



Calcium chloride might be effective, but it comes with consequences. When it absorbs moisture, it forms a **corrosive salty liquid** that can damage cargo and products, producing more waste and filling landfills.

This makes it unsuitable for companies prioritising responsible shipping and handling.

ViridiSorb™



ViridiSorb™ is purpose-built to deliver on performance and sustainability. It's a smart formula that **locks in moisture** as a non-corrosive solid, meaning clean disposal with no environmental harm.

Plus, thanks to its powerful efficiency, you **use up to 90% less material** compared to traditional desiccants, which means you also store, ship, and dispose of less. A lighter footprint from start to finish.

The Science Behind Moisture Control

Verified by Industry Experts

The Hidden Risk with Calcium Chloride

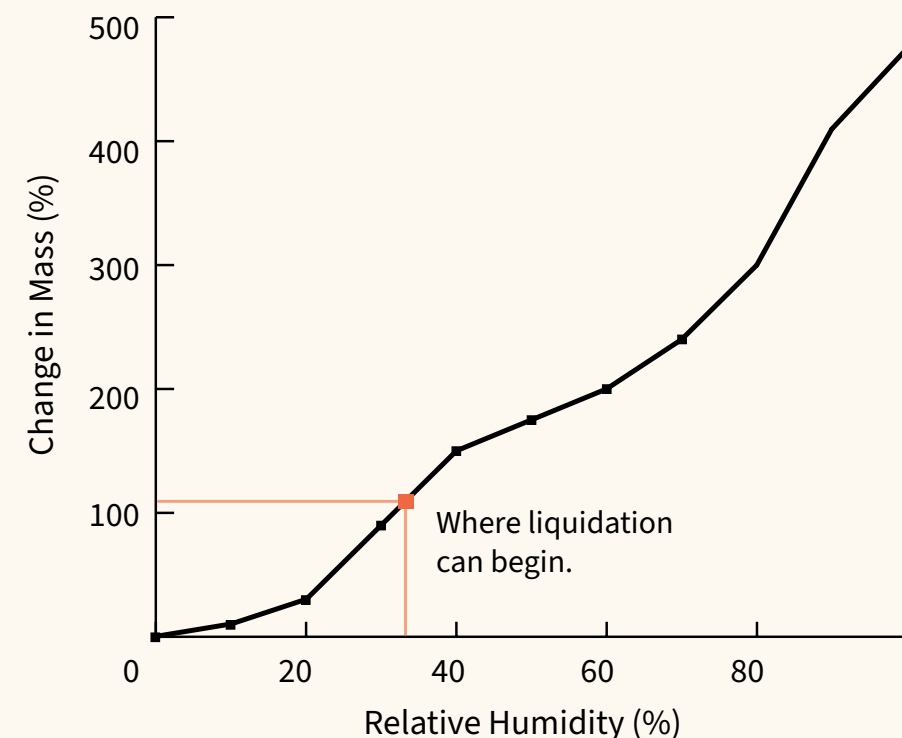
Renowned Cambridge educated chemical consultant **Nigel Somerville Roberts** set out to compare calcium chloride with VirdiSorb™ under real-world conditions. Calcium chloride is known for its high moisture uptake, but there's a catch: as it absorbs humidity, it turns into a **salty liquid that can damage metal** and other sensitive materials. Nigel's findings highlighted a key trade-off between raw absorption power and practical reliability.



Where calcium chloride breaks down, **VirdiSorb™ stays solid**. Its advanced formula doesn't just absorb moisture, it locks it in, transforming liquid into a stable, non-leaking form. That means **no drips, no corrosion, and no nasty surprises in transit**. It's moisture control that works just as hard at protection as it does at prevention.

The graph tells the story clearly: calcium chloride does absorb more as humidity rises, but it begins to **liquefy at just 33% relative humidity**, well below everyday ambient levels (typically 40–60%). Inside a sealed container, where humidity climbs even higher, **the risk of leakage spikes**. That can lead to **rust, stains, or cargo damage**. With VirdiSorb™, you don't just absorb moisture... You eliminate the risk.

How much moisture calcium chloride absorbs at 20°C



The results of a rigorous stress test, conducted to compare VirdiSorb™'s saturation and leakage performance against competing products, are presented below.

Competitor A

Pure calcium chloride

Leaked at day 17

Competitor B

Mix of calcium chloride and starch

Leaked on day 20

VirdiSorb™

Specially formulated compound

Fully saturated and no leaks on day 31

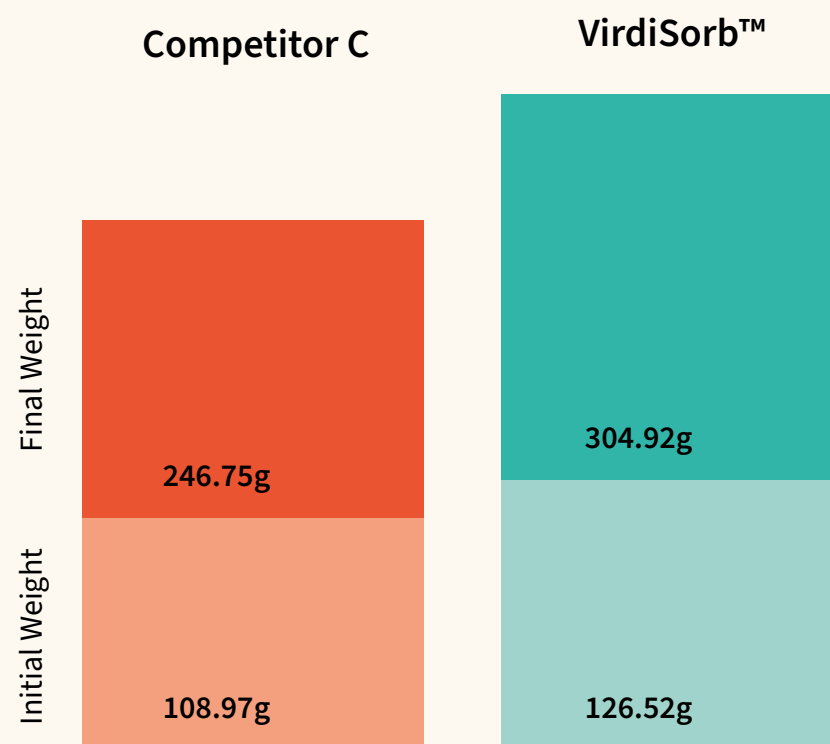


Simulated Cycle Testing

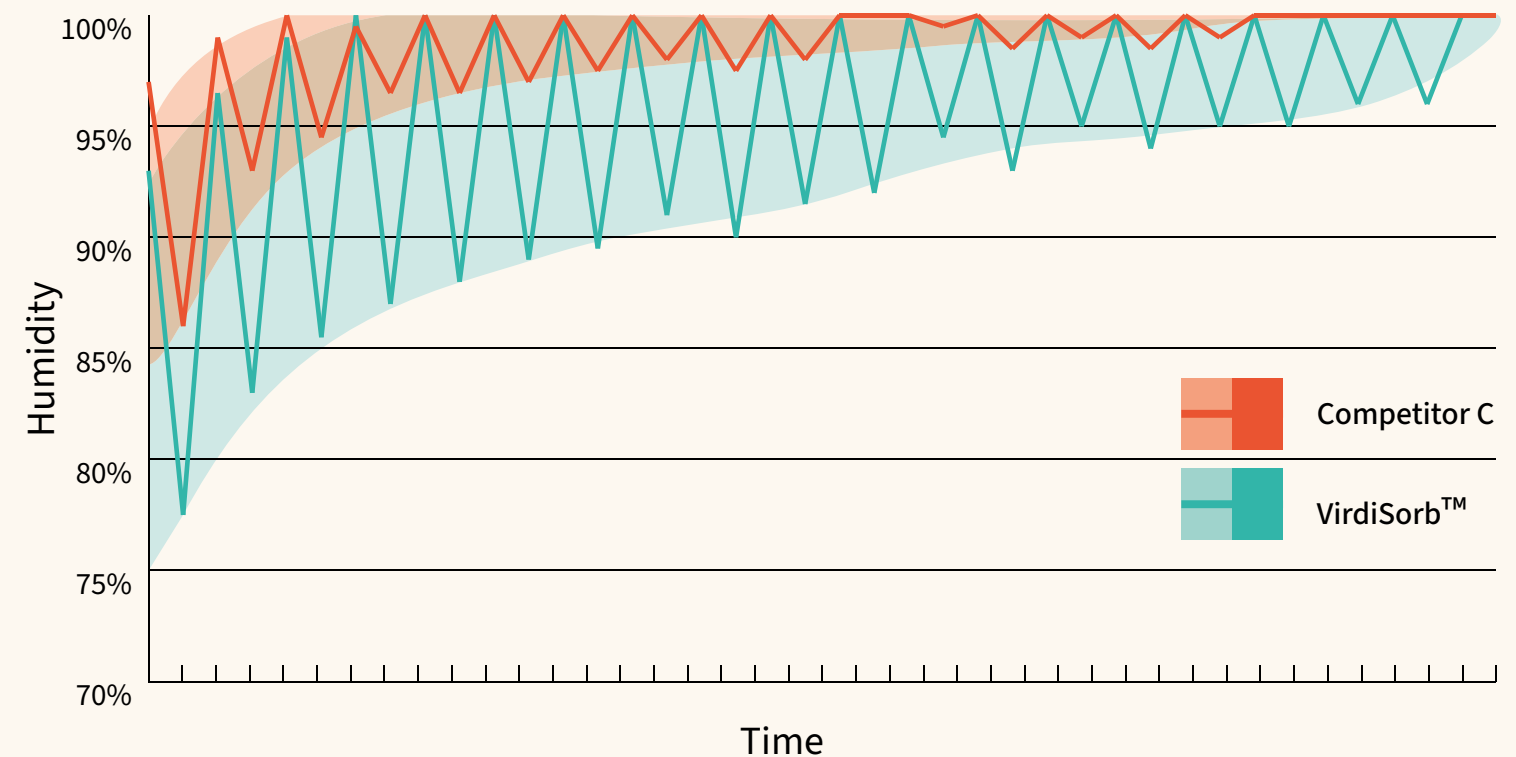
We put VirdiSorb™ head-to-head with a leading competitor in extreme conditions: 100% humidity, temperature swings from 40°C to 10°C every six hours, over ten days, all with just one sachet. The goal? Simulate some of the real-life challenges of global shipping, such as the humidity and temperature swings, where cargo faces everything from tropical heat to cold overnight stretches.

The results spoke for themselves. VirdiSorb™ absorbed **14% more moisture** than the competitor, and it's built to keep going for **up to 12 weeks** in transit. That means fewer risks, fewer returns, and more peace of mind.

If your cargo needs protection that lasts, **VirdiSorb™ delivers.**



Stress Test Results: VirdiSorb™ Maintains Lower Humidity Than Competitor C



The stress test results on the graph show that competitor C kept a higher humidity level throughout the test, and it stopped absorbing excess moisture around days six and eight. On the other hand, **VirdiSorb™ kept absorbing moisture and lowering humidity**, even when temperatures changed. **This makes it a great choice for long shipping trips.**

“VirdiSorb™ stopped all our shipping damages and complaints”



Silica Gel

- **Absorption at Moderate Humidity:** Retains only 25% at 50% relative humidity and 30–36% at 85%, limiting effectiveness in standard cargo conditions.
- **Early Saturation Risk:** Stores moisture in microscopic pores that saturate quickly during spikes, leaving cargo unprotected.
- **Environmental Impact:** The energy and water-intensive production process is misaligned with eco-conscious practices.
- **Low Retention Strength:** Moisture can be easily re-released into air, risking moisture damage.

Clay



- **Performance Boundaries:** Functions in narrow conditions; vulnerable to fluctuating temperature and humidity.
- **Low Absorption Capacity:** Generally, absorbs less than 30% of its weight, making it unsuitable for long-haul or high-humidity transport.
- **Finite & Extractive:** Clay is a non-renewable resource and requires high energy to mine and process.



VirdiSorb™

- **Exceptional Absorption:** Retains up to 200% of its weight in cargo environments.
- **Low-to-High Humidity Range:** Effectively absorbs across fluctuating conditions, not just at peak levels.
- **Leak-Proof Mechanism:** Forms a solid, cement-like mass that permanently locks in moisture.
- **Corrosion Prevention:** Protects packaging and goods with zero risk of leakage or re-release.
- **Efficiency Benefits:** Requires less material per shipment, use less, store less, buy less, save more.

“Excellent advice and product knowledge helped save thousands”

Protect your Products

Water & cardboard don't mix Exposure leads to warping, weakened stacking, and potential cargo collapse.

Mould & contamination risks Moisture encourages mould growth, which can spread to products and compromise quality and safety.

Stock instability & handling hazards Weakened packaging fails under pressure, risking falling inventory and damage.



Shipping & Logistics Prevents humidity-triggered damage to palletised goods, food exports, and electronic shipments.

Industrial Manufacturing Stops rust and corrosion in metal components, auto parts, and machinery during transit.

Food & Beverage Packaging Protects carton-packaged goods, grains, processed foods, and agricultural products from caking and mould.

Pharmaceuticals & Medical Storage Maintains the integrity of medications, sterile packaging, and vaccine transport.

Textiles, Fashion & Luxury Goods Keeps leather, clothing, and high-value accessories mould-free, ensuring pristine delivery.

Leading Companies *Trust* ViridiSorb™

ViridiSorb™ is the preferred choice across multiple industries, including automotive, aerospace, clothing, drinks, electronics, food, furniture, leather goods, metal parts, steel, and wooden products. Whether shipping high-value goods internationally or transporting items in enclosed boxes, bags, or containers, **ViridiSorb™ delivers unmatched protection** to keep your shipments safe and secure.



Global companies like **Ford, Cummins, Tata Steel, British Steel, Suntory Global Spirits, Formula 1 Part Manufacturers**, and many more rely on ViridiSorb™ to safeguard their shipments from moisture damage.

“We use ViridiSorb to guarantee race component integrity”

- F1 team

VirdiService™

Our Peace of Mind Promise

At Virdis Chemicals, we understand how critical supply chain reliability is to your business. That's why we've developed VirdiService™, ensuring your shipments arrive on time, every time, allowing you to focus on what matters most.

- Guaranteed delivery reliability – No interruptions, no delays.
- Dedicated logistics support – Our expert team ensures seamless planning and execution.
- Confidence in supply chain protection – So you can concentrate on running your business without worry.

“We don’t sell chemicals, we sell peace of mind.”

Virdis Values



Sustainable

Driving sustainable progress through continuous innovation, we develop pioneering products and services that make a lasting difference.



Value

Upholding excellence and delivering meaningful value, we maintain the highest standards to strengthen trust with our stakeholders.



Balance

Championing creativity, clarity, and balance, we approach every goal with a thoughtful and inspired mindset.



Positivity

Cultivating warmth and positivity, we foster genuine connections and a collaborative, friendly approach in all interactions.

Available Immediately

VirdiSorb™ is available immediately in the following sizes:

VirdiSorb™ 250T	VirdiSorb™ 500T	VirdiSorb™ 1250H
Sachet with adhesive backing.	Sachet with adhesive backing.	Strips of VirdiSorb™ on a hanger.
50 sachets per box	30 sachets per box	10 hangers per box
60 boxes per pallet	60 boxes per pellet	60 boxes per pallet

Other sizes and quantities can be made upon your request.
Contact us to learn more!



VirdiS✱rb



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