Sublime Systems


Cement produces 8% of global CO_2
4 billion tons
cement /year
1ton = ~1ton
Portland cement
of CO_2

Sublime's breakthrough

Avoids CO_2

Cost parity at scale

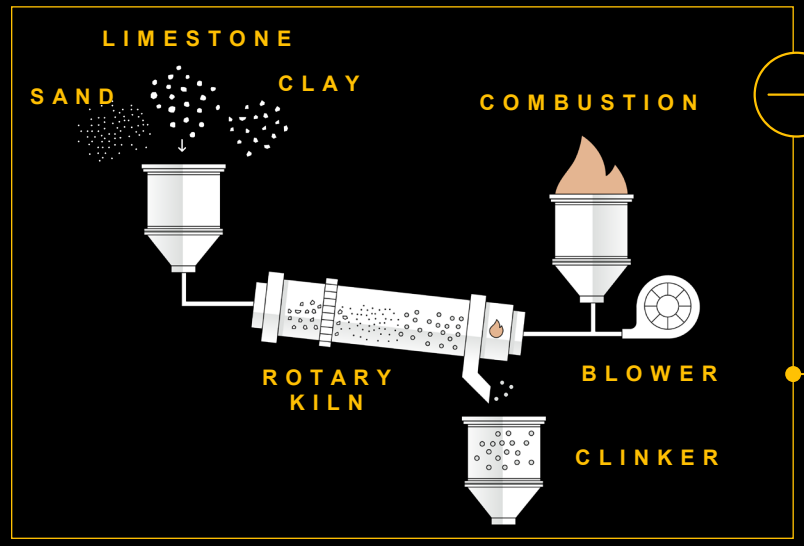
Better cement

Saves energy

Unlocks critical minerals

Sublime Breakthrough:

Sublime replaces the high-temp/combustion-driven kilns with an ambient temperature electrochemical process that avoids pollution while making the same hardened concrete we've been using for millennia

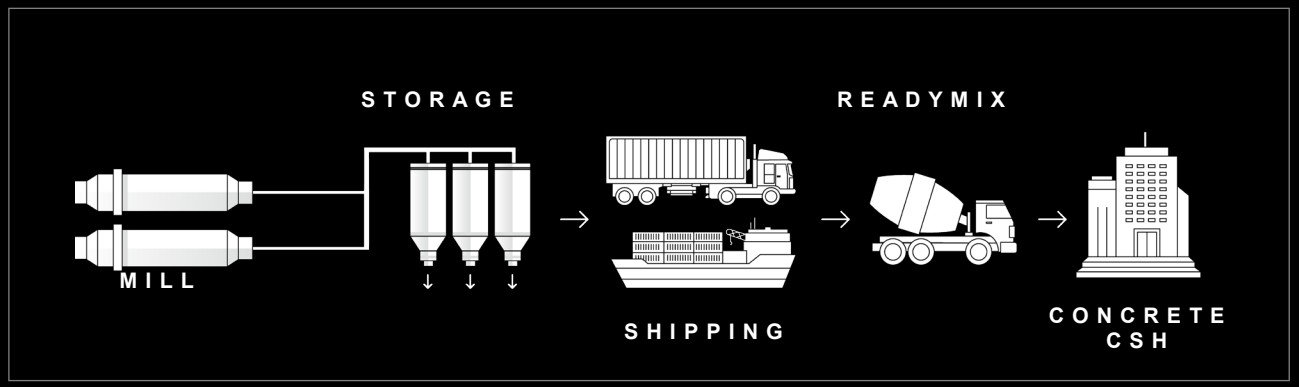


Ordinary Portland Cement (OPC) Process

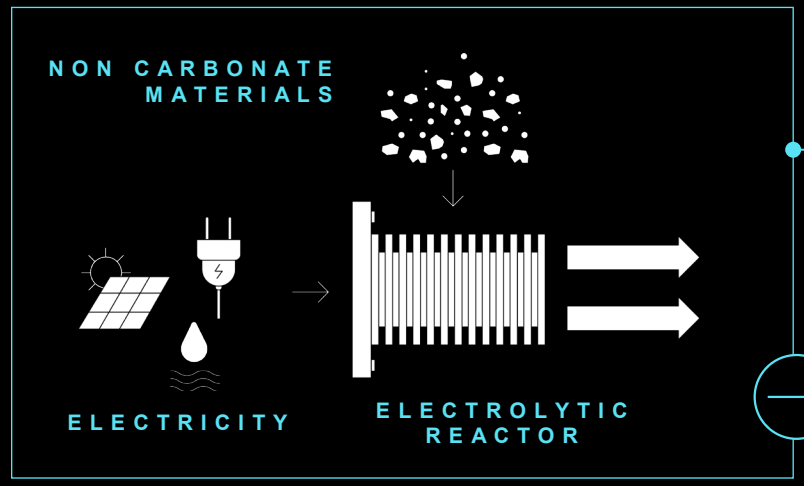
Coal + limestone = CO_2 | 1 tonne OPC = ~1 tonne CO_2

Cannot integrate with Critical Minerals & Materials (CMM) Value Chain - critical minerals would remain trapped in cement product

Sublime stores, pours, and performs just like OPC



Sublime forms the same hardened phase of concrete as OPC: C-S-H (calcium silicate hydrate)



Sublime Systems

Electricity + non-carbonate rocks = CO_2 avoided

Integrates with CMM Value Chain - Critical minerals are separated from cementitious stream

Sublime’s “Refinery for rocks”

Sublime’s process dissolves rocks into constituent minerals, so that we can assemble the ideal cement composition from pure components.

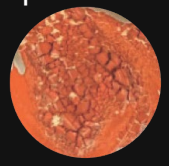
Feedstocks

Feedstocks include common igneous rocks and industrial wastes, such as slags, coal bottom ash, municipal incinerated solid waste

Sublime’s Process

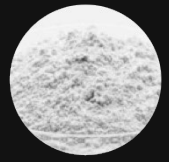
Valuable mineral coproducts

Iron oxide products



87% imported (China/Germany)

Magnesium compounds



Critical mineral
50% imported (China)

Cementitious minerals

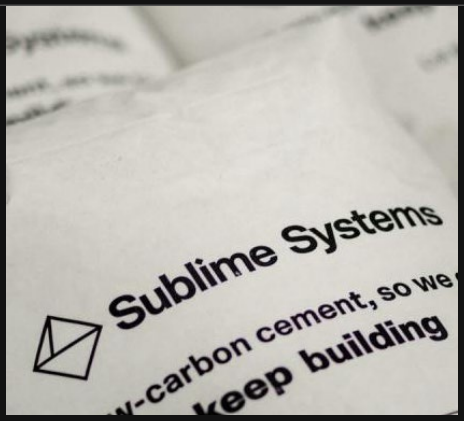
Lime $Ca(OH)_2$

Silica SiO_2

Alumina Al_2O_3

Near-critical mineral
59% imported

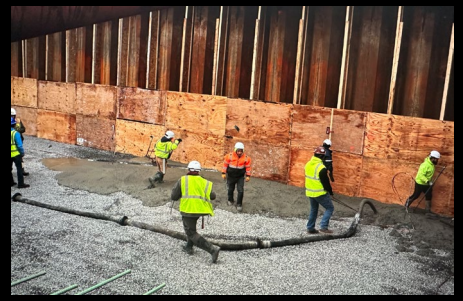
Sublime Cement®



A 1:1 replacement for OPC in concrete. Validated by 3rd parties to meet ASTM C1157, performance-based specification for hydraulic cement, approved by concrete industry specifications and International Building Code.

Sublime Cement in the ground! Successful field trials in 2024 & 2025

Slab



Date: 1/19/24
Location: Boston
Conditions: 28°F
Volume: 6 yds

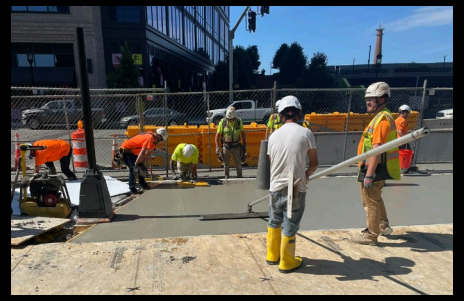
Highlights:
- Pumped ~250 ft
- Set in cold & windy conditions

Foyer

Date: 4/22/24
Location: Boston
Conditions: Interior
Volume: 12 yds

Highlights:
- Finished and polished
- Validated negligible batch-to-batch variability

Sidewalk



Date: 7/03/24
Location: Boston
Conditions: 80°F
Volume: 7 yds

Highlights:
- Entrained air + reinforcing fibers
- Place & finish completed in typical window on hot, humid day

Distribution Center External Pad

Date: 12/20/24
Location: VA Beach
Conditions: 40°F
Volume: 7 yds

Highlights:
- 1st pour outside NE with new Ready-Mix/GC partners
- Enabler of offtake negotiation with major datacenter operator

Data Center Loading Dock

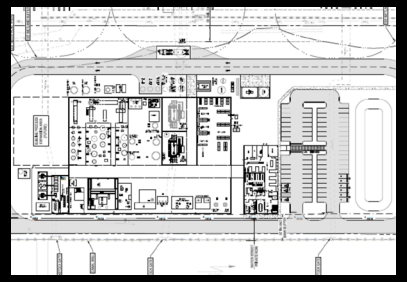
Date: 5/01/25
Location: D.C. Area
Conditions: 77°F
Volume: 7 yds

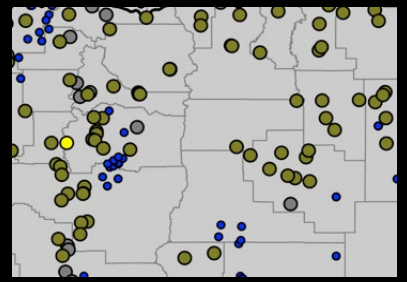
Highlights:
- High-traffic loading dock, good durability proof point
- Enabling joint PR with hyperscaler

From grams to mega-tonnes in 10 years

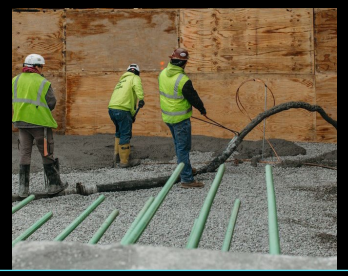
We are here

	2020	2023-2025	2028	2031
Capacity	R&D Lab **1g** Proof of concept	Pilot **250t/y** Precursor to FOAK	1st Commercial **30kt/y** Industrial-scale operation	MegaPlant **1Mt/y** Full-scale, market-rate
Objective	Proof of concept	Validate product and process	Eliminate scale-up risk	Deploy at scale, compete in market





2021	2022	2023	2024	**2025**
Product validation				



Addressing the “Missing Middle”

“technologies must cross the chasm between early innovation and mass commercialization”

Sublime is the next-gen cement technology of the 3 largest industry players in historic $75M deal in 2024

In the largest ever cement start-up venture investment, Holcim, CRH, and Amrize (collectively with a market cap of over $125B) invested and partnered with Sublime to jointly develop multiple megaton-scale projects, seeing Sublime as a core method to decarbonize over 100 plants by 2050

Sublime has massive go-to-market traction with Hyperscalers & Builders **in the Private Sector**

205%

oversubscribed for first 3 years at 1st commercial plant

5

successful commercial demos to date

9+

Distribution Channel Partners, incl. with Turner (largest general contractor in US), Suffolk (largest general contractor in New England), and more representing $60B+ in annual revenues

~650,000

tonnes purchased/pre-paid

Paid pilot at Boston Seaport, 2024

Microsoft · Turner · DPR Construction · Suffolk · STO Building Group

Holder · Consigli (Est. 1905) · Samet · DMC (Established in 1879) · WS

Addressing the “Missing Middle”

“The public sector is half the market…”

Checklist for the Public Sector

Accelerating Advanced Manufacturing

- ✓ Fund the scale-up of innovative competitive American technology
- ✓ Support CapEx investment in innovative manufacturing assets that displace the imports of materials that can be made here
- ✓ Aggregate demand amongst public and private efforts and share risk
- ✓ Investment tax credits & production tax credits

Using Innovative Products

- ✓ Encourage Advanced Market Commitments for public agencies
- ✓ Modernize specifications to allow performance-based standards (i.e. ASTM 1157)
- ✓ Standardize embodied carbon reporting (EPDs)
- ✓ Announce intentions to purchase or pilot low carbon materials

Sublime Systems

Keep building