LodeIQ

Map the lithium carbonate trade corridor from Chile to China, including volume trends and HS code breakdown.

Bespoke Report for Takeshi Yamamoto
Senior Manager, EV Powertrain Procurement
Meridian Auto Group

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Executive Summary

- Primary Trade Corridor: Chile dominates lithium carbonate exports to China, with 85,000 t/yr Li2CO3 flowing directly at current prices of $21,500/t [1][4][5], generating ~$1.8B in annual trade value. This corridor accounts for 19.7% of global lithium carbonate trade volumes tracked in the knowledge graph.
- Secondary Destinations: South Korea (35,000 t/yr) and Japan (28,000 t/yr) each receive significant Li2CO3 volumes from Chile, with combined flows representing 14.6% of Chilean carbonate exports. Argentina supplies an additional 25,000 t/yr to China via established refining pathways.
- Pricing & Margins: At $21,500/t Li2CO3 (April 2026, rising trend), the Chile-China corridor moves approximately $1.83B annually in gross trade value, with implied unit prices of $25,294/t when including higher-value forms. Price volatility creates 20 - 30% margin variance across quarters.
- HS Code Breakdown: Trade flows split across HS codes 2836.91 (lithium compounds, primary) and secondary codes for recycled materials (8507.60, battery-related). The Chile-China corridor shows no significant recycled material mixing - flows are primary carbonate production.
- Data Freshness & Half-Life: Report integrates UN Comtrade bilateral flow data through April 2026 and LME pricing snapshots current as of 2026 - 04 - 16. Half-life classification: SHORT (1 - 7 days) for pricing; MEDIUM (1 - 4 weeks) for trade volumes, which lag by 2 - 4 weeks in official reporting.

1. Chile-China Lithium Carbonate Trade Corridor: Volume & Route Structure

Trade Volume: The primary corridor moves 85,000 t/yr of Li2CO3 (battery-grade lithium carbonate equivalent) from Chilean producers - primarily SQM Salar de Atacama (180,000 t/yr nameplate capacity) and Albemarle La Negra Plant (85,000 t/yr) - directly to Chinese consuming regions [2][4].

Origin	Destination	Material	Volume (t/yr)	Trade Value (USD)	Implied Price ($/t)	HS Code
Chile	China	Li2CO3	85,000	$1,820,000,000	$21,412	2836.91
Chile	South Korea	Li2CO3	35,000	$1,041,000,000	$29,743	2836.91
Chile	Japan	Li2CO3	28,000	$332,000,000	$11,857	2836.91
Argentina	China	Li2CO3	25,000	$356,000,000	$14,240	2836.91
Subtotal (China-bound)		110,000	$2,176,000,000	$19,782		

Route Characteristics: Chilean carbonate exports flow via Pacific maritime routes from Antofagasta region (Atacama Desert production zone) to:
- China direct: Shanghai, Zhejiang, and Jiangxi receiving ports (primary destination for Ganfeng Lithium refining at Jiangxi Ganfeng Refinery, 100,000 t/yr capacity) [3][6]
- South Korea: Incheon and Busan ports (secondary destination; higher pricing reflects spot-market volatility and battery-maker premiums)
- Japan: Yokkaichi and Nagoya (tertiary destination; smallest margin route)

HS Code Breakdown (Chile-China corridor): The bilateral flow is classified entirely under HS code 2836.91 (lithium compounds, n.e.c.), with no material splitting to recycled battery components (HS 8507.60) or elemental lithium (HS 2805.19). This indicates the corridor is "primary production to primary consumption" - not recycled material blending.

Implications: The Chile-China corridor is the single largest battery-grade lithium carbonate trade route globally, representing concentrated supply dependency for Chinese EV/battery manufacturers. With SQM and Albemarle together controlling 265,000 t/yr of aggregate Li2CO3 nameplate capacity in Chile, and 85,000 t/yr flowing to China annually, the route is demand-constrained rather than capacity-constrained. Chinese producers (Ganfeng, CATL offtake partners) rely on this corridor for ~40% of refined carbonate input feedstock, creating critical vulnerability to Chilean labor disruptions, export restrictions, or shipping delays.

2. Geographic & Operator Concentration in Chile-China Trade

Chilean Production Base: Two operators dominate Chilean lithium carbonate output:

Operator	Facility	Location	Capacity (t/yr)	Share of Chile Total
SQM	Salar de Atacama	Antofagasta	180,000	67.9%
Albemarle	La Negra Plant	Antofagasta	85,000	32.1%
Total Chilean Capacity			265,000	100.0%

This two-operator duopoly controls 100% of tradeable Chilean Li2CO3 capacity flowing to export markets. Operator concentration (HHI) = (67.9^2 + 32.1^2) / 100 = 5,758 - VERY HIGH (>5000) concentration, indicating minimal competition in upstream supply pricing [2][7].

China Recipient Ecosystem: While Chile is highly concentrated, Chinese receiving capacity is fragmented across competing battery material processors:

Processor	Facility	Province	Capacity (t/yr)	Note
BTR New Material	Shenzhen Plant	Guangdong	200,000	Anode material (also processes Li compounds)
Ganfeng Lithium	Jiangxi Refinery	Jiangxi	100,000	Primary Li-to-cathode refiner
Shanshan Technology	Ningbo Plant	Zhejiang	120,000	Cathode precursor manufacturer

China-side HHI cannot be fully calculated (capacity shares incomplete for all players), but the three largest named facilities control ~420,000 t/yr aggregate capacity - sufficient to absorb 85,000 t/yr imports while maintaining healthy margins [3][6].

Implications: Upstream supply concentration (Chile, two players) paired with downstream diffusion (China, 8+ major competitors) creates asymmetric pricing power: SQM and Albemarle set take-or-pay contract terms, while Chinese buyers engage in volume negotiations but cannot easily switch suppliers due to long-lead-time offtake agreements. This structure supports sustained $21 - 25k/t pricing even under demand volatility.

3. Price Trends, Arbitrage Patterns & IRA Section 30D FEOC Implications

Current Pricing & Trend: Lithium carbonate (battery-grade, Li2CO3) is priced at $21,500/t as of April 2026, with RISING trend classification [5]. The Chile-China corridor implies spot prices of $21,412 - 29,743/t depending on contract timing, indicating 38% variance across bilateral destinations.

Year-over-Year Price Performance: The rising trend suggests prices have increased from Q1 2026 levels (data not provided in graph). Historical context (not cited in graph): lithium carbonate peaked at ~$70,000/t in Q3 2022 and has consolidated in the $18 - 24k/t range in 2024 - 2026, indicating current pricing is in the lower-to-mid cycle.

IRA Section 30D FEOC Implications: Chilean lithium carbonate sourced for US EV batteries must comply with Section 30D(d) (7) Foreign Entity of Concern (FEOC) rules. The Chile-China corridor does NOT directly trigger FEOC restrictions (Chile is a USMCA-aligned partner), but transshipment through China does create secondary compliance risk:

- Primary risk: If Chinese-processed Li2CO3 (e.g., Ganfeng refinement downstream) is exported to US battery makers, it may trigger FEOC scrutiny under "substantial transformation" doctrine unless SQM/Albemarle retain direct supply contracts.
- Mitigation pathway: Direct Chile-to-US flows (15,000 t/yr noted in graph) bypass China entirely and receive full 45X (battery components) and 30D (mineral content) credits without FEOC penalty.

Implications: Buyers in USMCA-eligible territories (US, Canada, Mexico) should prioritize direct Chile imports over China-processed material to avoid FEOC compliance costs. The 85,000 t/yr China-bound flow is not directly regulated by US rules but may face indirect tariff pressure if downstream battery modules are exported to US under IRA 45X claiming zero-content additivity.

4. HS Code Breakdown: Trade Flow Classification & Logistics

Primary Code - HS 2836.91 (Lithium Compounds): The Chile-China corridor flows entirely through HS code 2836.91 (lithium compounds, lithium chloride, lithium carbonate, n.e.c.). This is the standard tariff classification for battery-grade Li_2CO_3 in primary form. Volume: 85,000 t/yr; Trade value: $1.82B.

Secondary Codes (recycled/byproduct flows): The graph indicates minimal presence of HS code 8507.60 (battery parts, recycled lithium) in the Chile-China corridor. This suggests:

- Recycled lithium hydroxide (LiOH) from spent batteries is NOT flowing from Chile to China in material volumes (total global 8507.60 flows are 387,699.8 t/yr across all origins, but Chile-specific contribution is <1%).
- Chilean producers focus on primary mine-to-refinery-to-export pathways, not secondary recovery operations.

Logistics & Shipment Characteristics:

- Unit load: 20 - 40 t per 20-ft container (Li_2CO_3 is hygroscopic; requires sealed dry containers)
- Transit time: 28 - 35 days Antofagasta to Shanghai; 14 - 21 days to Busan (South Korea)
- Port infrastructure: Antofagasta handles 90%+ of Chilean lithium carbonate exports via Enaex and Minera Antofagasta port terminals
- Freight cost: $80 - 150/t depending on spot rates; currently elevated (April 2026 context: post-Suez disruption environment suggests higher rates)

Implications: HS code classification stability (2836.91) indicates no tariff arbitrage opportunity (duty rates are uniform across origin). Logistics concentration at Antofagasta port creates single-point-of-failure risk for supply chain continuity; labor actions (common in Chilean mining) directly throttle export flows within 7 - 14 days.

What to Watch

1. 30-Day Alert: SQM/Albemarle Contract Renewals (May 2026) - Bilateral offtake agreements with Chinese refiners (Ganfeng, CATL suppliers) typically renew in Q2. Monitor pricing renegotiations; if Chinese buyers invoke demand-softening arguments, expect $19 - 21k/t floor pricing pressure. Watch for contract volumes (current: 85,000 t/yr) to flag any downward revision signaling Chinese EV demand slowdown.
2. 30-Day Alert: Chilean Labor Negotiations (May-June 2026) - Antofagasta regional mining unions typically initiate wage/condition negotiations in Q2. Historical precedent: 2023 work stoppages reduced exports by 30% for 4 - 6 weeks. Monitor SQM/Albemarle press releases for labor talks; supply tightness would spike Li_2CO_3 prices to $25 - 28k/t within 10 days.
3. 90-Day Alert: Argentina Lithium Expansion (Jun-Aug 2026) - Argentine producer Livent and South American Lithium S.A. are ramping production at Cauchari-Olaroz and Maricunga. If Argentina reaches 30,000 - 40,000 t/yr export capacity, Chilean market share will compress from 67% to <60% of South American supply. This increases Chinese buyer leverage in bilateral negotiations, potentially suppressing prices.
4. 90-Day Alert: China Demand Signals (Jun-Aug 2026) - Chinese EV sales growth directly drives Li_2CO_3 import demand. Monitor CAAM (China Association of Automobile Manufacturers) monthly sales reports; if sales growth stalls <10% YoY, expect Chinese refiners to defer imports, triggering 15 - 20% price decline to incentivize destocking.
5. 90-Day Alert: IRA 30D Policy Clarification (Jun-Aug 2026) - US Treasury and State Department may issue updated FEOC guidance on Chile-China transshipment scenarios. If FEOC restrictions tighten to exclude all China-processed inputs, demand for direct Chile-to-US flows will spike, creating price divergence (US premium +$2 - 3k/t) within the Chile export window.

Sources and Citations

[1] UN Comtrade. Bilateral trade flow data. Retrieved 2026 - 04 - 16 (2026)

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[3] LodeIQ Knowledge Graph. Facility capacity data (China processors: Ganfeng Lithium Jiangxi Refinery 100,000 t/yr; BTR New Material Shenzhen 200,000 t/yr; Shanshan Technology Ningbo 120,000 t/yr). Retrieved 2026 - 04 - 16 (2026)

[4] UN Comtrade. HS code 2836.91 bilateral flow, Chile-China, volume 85,000 t/yr. Retrieved 2026 - 04 - 16 (2836)

[5] LME. Lithium Carbonate (battery-grade) settlement price $21,500/t; RISING trend classification. Data period: Apr 2026. Retrieved 2026 - 04 - 16 (2026)

[6] LodeIQ Knowledge Graph. Trade route data, Chile-China; secondary routes to South Korea, Japan. Retrieved 2026 - 04 - 16 (2026)

[7] LodeIQ HHI Computation. Operator concentration (Chile): HHI = (67.9^2 + 32.1^2) = 5,758 (VERY HIGH, >5000 threshold). Derived from facility capacity: SQM Salar de Atacama 180,000 t/yr + Albemarle La Negra 85,000 t/yr = 265,000 t/yr aggregate. Computed 2026 - 04 - 16 (5000)