

CMP: ₹ 705.10

Target: ₹ 840 **•** +19%

Investment Horizon: 12 – 18 months

Rating: Accumulate

Industry: Specialty Chemicals

Date: 03 Dec, 2024









Company Overview

Archean Chemical Industries Ltd. (ACI) is India-based specialty chemicals manufacturer, focusing on marine-derived chemicals having applications across industries such as agriculture, pharmaceuticals, water treatment, aluminum, glass, and textiles. Leveraging India's unique brine resources, ACI produces and exports high-purity bromine, industrial salt, and sulfate of potash (SOP), which are essential for a range of industrial processes. The company operates an integrated production facility in Hajipur (Gujarat).

- **Product Portfolio:** ACI's product portfolio comprises three key marine-derived products: (i) Bromine & Bromine Derivatives, (ii) Industrial Salt, and (iii) Sulfate of Potash (SOP).
- Leadership in Specialty Marine Chemicals: ACI has emerged as one of India's leading specialty marine chemicals producers, with a strong position in bromine and industrial salt. Archean is the largest exporter of bromine and industrial salt in India and has the lowest cost of production when compared to global peers. Company's industrial salt business is fully export oriented. Archean also manufacturers sulphate of potash (SOP) from natural sea brine in India.
- Clientele Across Global and Domestic Markets: ACI serves a diversified client base of over 40 international and 32 domestic clients as of Q2FY25, including reputable companies like Sojitz Corporation, Wanhua Chemical Group, Tianyi Group, and Unibrom Corp. The company has built strong relationships with key customers, with seven of its top ten clients maintaining a partnership for over five years. This solid client base contributes to ACI's revenue profile, with 25% of revenue derived from domestic sales and 75% from exports. Notably, ACI derives 32% of its revenue from its largest customer account, while top 10 accounts for 71% of the total revenue and top 20 around ~90% of the top line.

Quick Data					
Face Value (Rs.)	2.0				
No. of Shares (Cr)	12.3				
MCAP (Rs. Cr)	8,686				
52W H/L (Rs.)	838 / 571				
BSE Code	543657				
NSE Symbol	ACI				
Book Value (FY24)	137.9				

Ratios					
ROE (FY24)	20.4%				
ROCE (FY24)	22.4%				
P/E Ratio (ttm)	39.7				
P/BV (ttm)	4.9				
Dividend Pay-out	11.5%				
Dividend Yield	0.4%				



- Strategically Located Manufacturing Facilities enabling operational efficiencies: ACI's manufacturing facility is located in Hajipur, Gujarat, an area known for its abundant brine resources at the Great Rann of Kutch. This strategic location provides easy access to raw materials and proximity to Jakhau Jetty and Mundra Port, enabling efficient export logistics. The Jakhau Jetty operates as a fair-weather facility with a designed capacity of 50 Lakh Tonnes per annum and the capability to load 28,000 MT per shipment via a twin conveyor system. This logistical advantage allows ACI to ensure timely and cost-effective deliveries to international customers. The integrated nature of ACI's operations from brine extraction to final product delivery contributes to its operational efficiency.
- Expansion Initiatives: Brownfield and Greenfield Projects: ACI, via its subsidiary Acume Chemicals Pvt Ltd, has launched a new facility with a 28,000 MTPA capacity. Phase I was commissioned on March 14, 2024. This facility is set up to produce bromine derivatives: brominated flame retardants, clear brine fluids, and bromine catalysts. Capex related to flame retardants division is currently on hold, management will take a call depending on business opportunity. Additionally, ACI is expanding its industrial salt production capacity by adding an additional washery unit, which will further enhance its production capabilities & output volume from 40 Lakh Tonnes p.a. to 50 Lakh Tonnes per annum.
- Diversification Through Investments in Emerging Sectors: As part of its growth and diversification strategy, Archean has made targeted investments in the semiconductor and energy storage space. Its investment in Clas-Sic Wafer Fab Ltd, which specializes in Silicon Carbide (SiC) MOSFETs (metal-oxide-semiconductor field-effect transistor), aligns with India's broader semiconductor initiatives. This partnership may enable ACI exclusive access to advanced SiC technology, for India centric opportunities. ACI has also invested in Offgrid Energy Labs, which specializes in zinc-bromide battery technology. This battery offers high cycle life and safety for energy storage applications. Capital raised through ACI by Offgrid will be utilized in setting up a pilot manufacturing facility in UK. The future understanding is to set up a large-scale facility in India, subject to commercial success of this technology.

Shareholding Patte	ern (Sept-24)
Promoters	53.5%
FII	10.2%
DII	22.0%
Public	14.4%

Stock Price Movement					
5d	-0.5%				
30d	+7.9%				
3m	-2.2%				
52w High	-15.9%				
52w Low	+23.5%				



- Research and Development: Archean maintains a state-of-the-art R&D facility at its plant location in Hajipur (Gujarat), where it engages in continuous research to refine brine chemistry and explore downstream bromine derivatives. The R&D facility at Jhagadia focuses specifically on bromine derivatives, which are essential for creating performance products such as flame retardants and other specialty chemicals.
- Environmentally Sustainable Practices and certifications: ACI prioritizes sustainable and responsible practices, reflected in its ongoing certification process with the Indian Chemical Council's "Responsible Care" initiative. The company's operations are designed to minimize environmental impact by converting Arabian Sea brine into bromine, industrial salt, and SOP with minimal waste. As a "Green Organization," ACI continuously evaluates its processes to reduce environmental harm, making it a preferred supplier for environmentally conscious clients. Archean has been accredited with the Four-Star Export House Accreditation by India's Directorate General of Foreign Trade; and the REACH Certification (Registration, Evaluation, Authorization, and Restriction of Chemicals). REACH facilitates the export of its SOP products to European markets, showcasing its alignment with stringent global regulatory standards for chemical exports.
- Financial Restructuring and IPO: In FY2016-2017, the company faced significant financial challenges due to project delays, which led to a debt restructuring program under the Scheme of Sustainable Structuring of Stressed Assets (S4A) in March 2017. To further stabilize its financial position, the India Resurgent Fund (IRF) a joint venture between Bain Capital Credit and Piramal Enterprises invested Rs. 840 crore via Non-Convertible Debentures (NCDs) in September 2018, enabling ACI to retire its restructured debt and support its bromine project expansion. In November 2022, ACIL raised Rs. 1,463 crore through an Initial Public Offering (IPO), with Rs. 657 crore as an Offer for Sale and Rs. 805 crore through fresh issue, earmarked for strategic financial initiatives, including the redemption of NCDs and general corporate purposes.





Investment Rationale

- 1) Product Prices likely to bottom out: Bromine prices, which hit rock bottom at ~ Rs. 205/kg in Q2FY25, have shown a recovery, reaching ~ Rs. 260/kg by November 2024. Global demand is signaling commencement of upcycle for bromine. Historically, highs for bromine was ~Rs. 600/kg in FY23 and ~Rs. 300+/kg in FY24, reflecting the potential of upside on strong global demand.
- 2) Price stability in Industrial Salt: Industrial salt prices have remained steady at ₹1.50-₹1.60/kg for last 6 months, showing signs of strength. The potential upside based on historical levels can be as high as ₹2/kg. ACI is gearing up for upcoming volume led growth by enhancing capacity to 50 Lakh tonnes per annum over next couple of years (from 40 Lakh tonnes presently). Overall, demand cycle looks to be on a cusp of uptrend.
- 3) Sulphate of Potash (SOP) Growth Potential: SOP production, currently constrained by sodium chloride chemistry challenges, is set to witness a turnaround. Successful lab trials with German and Australian partners indicate resolution is near. Plant-scale tests are scheduled before the CY26 monsoon. As the only green SOP producer in India, Archean's unique position enables pricing power in an undersupplied market, with firm demand offering significant operating leverage from FY26 onwards.
- 4) Promising new product launches to aid revenue: Archean's investments in bromine derivatives, including Clear Brine Fluids (CBFs), high-end flame retardants and PTA catalysts, are expected to deliver meaningful contributions starting H2FY25. These products will not only diversify revenue streams but would also enhance value addition.
- 5) Future-Ready Investments: ACI is proactively diversifying into high-potential sectors with strategic investments in Clas-SiC Wafer Fab (semiconductors) and Offgrid Energy Labs (zinc-bromide batteries). These ventures align with global megatrends in energy transition and digital infrastructure, with meaningful revenue contribution expected from FY28 onwards.
- 6) Long-Term Tailwinds: With a forecasted cyclical recovery in FY26, a robust product portfolio, and strategic positioning as a sustainable producer, Archean is set to thrive in a conducive global macroeconomic environment. Its leadership in niche markets, operational efficiencies, and forward-looking investments makes it a compelling growth story in the specialty chemicals sector.

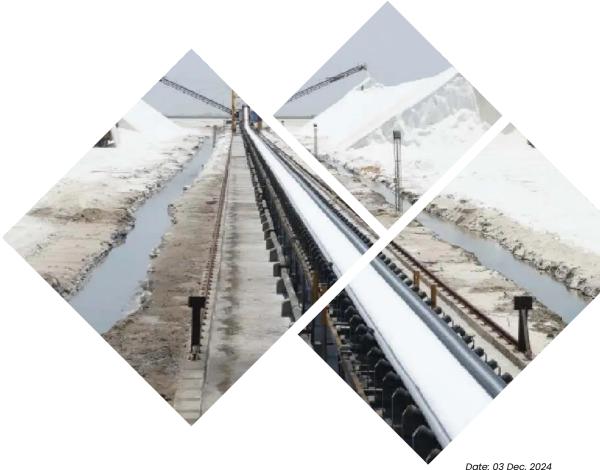
Archean Chemical Industries is a robust play on the recovery in bromine and industrial salt markets, the scaling of SOP production, and the expanding footprint in high-growth derivative and technology sectors. Worst seems to be behind it, the company is set to capitalize on favorable macroeconomic trends and its strategic growth initiatives, making it an attractive investment for long-term value creation.





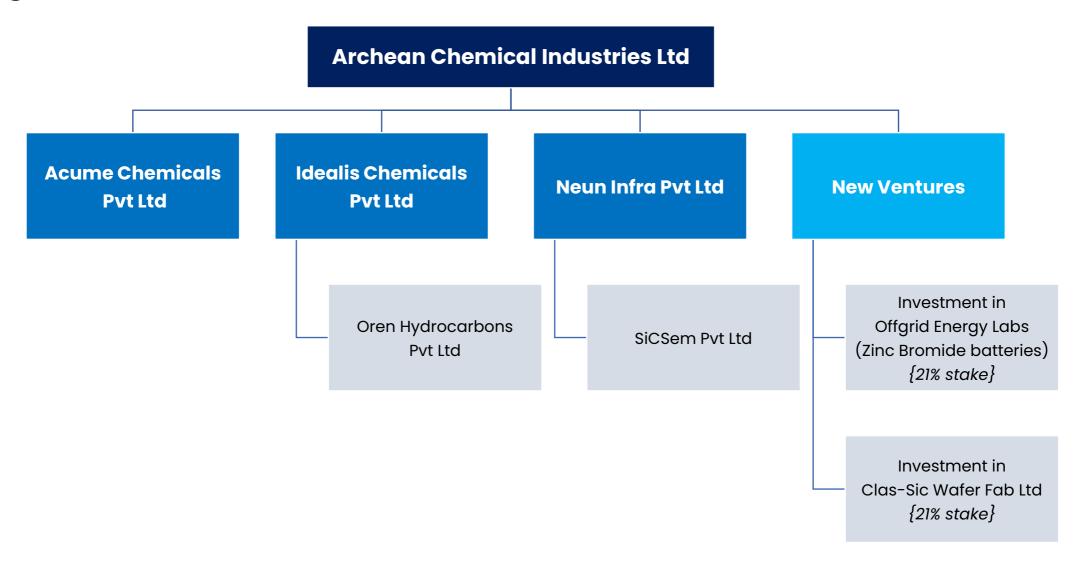
Valuation

- Valuing, the company at a PER of 28x FY26e, the target price per share comes at Rs. 840, implying an upside of +19% from CMP of Rs. 705.
- We expect this price target to be achieved over next 12 to 18 months.
- We have valued the company based on FY26 earnings estimated, at a PEG ratio of 0.56x.





Organisation Structure

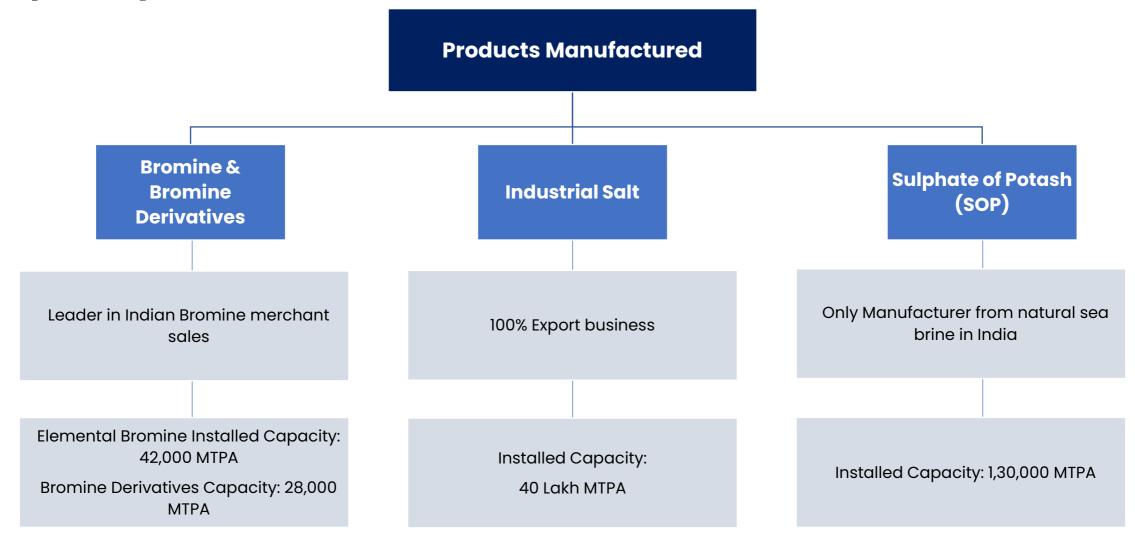




- 1) Acume Chemicals Private Limited (ACPL): ACPL, a wholly owned subsidiary of Archean Chemical Industries, specializes in the manufacture of organic and inorganic bromine derivatives. A new production facility with a capacity of 28,000 MTPA was launched by ACPL, with Phase 1 commissioned on March 14, 2024.
- 2) Idealis Chemicals Private Limited: Established on October 5, 2023, Idealis Chemicals Private Limited is a wholly owned subsidiary of ACI. Idealis emerged as the successful bidder for Oren Hydrocarbons Private Limited (Oren) under the Insolvency and Bankruptcy Code, 2016. This strategic acquisition strengthens ACIL's offerings in the completion and drilling fluids sector by adding Oren's portfolio of drilling chemicals and specialty solutions for the hydrocarbon exploration and production industry.
- 3) Oren Hydrocarbons Private Limited (Oren): ACI acquired Oren Hydrocarbons for Rs. 76.90 crore, with the sale certificate issued on February 22, 2024. Oren is a leading manufacturer of drilling fluids, with operations spanning the UAE, Iraq, and Egypt. Its expertise in products such as Barite, Bentonite, Calcium Carbonate, and other specialized chemicals for water and oil-based applications complements ACI's bromine derivatives business. The acquisition enables Archean to expand its portfolio with biocides, corrosion inhibitors, and scale inhibitors, enhancing its ability to serve the global oil drilling sector. Refurbishment of Oren's production sites is underway, with two plants expected to be fully operational within weeks, contributing to revenues from Q4FY25 onwards.
- 4) Neun Infra Private Limited: Neun Infra Private Limited is a key subsidiary of ACIL. No public data is available regarding its operations.
- 5) SiCSem Private Limited: SiCSem Private Limited, a subsidiary of Neun Infra Private Limited, serves as a step-down subsidiary of Archean. Incorporated with an authorized share capital of ₹5 lakh, Neun holds a 70% stake in SiCSem. The company focuses on establishing a vertically integrated facility for manufacturing Silicon Carbide (SiC) power devices. SiCSem aims to cater to emerging markets, including electric vehicles (EVs), solar inverters, fast chargers, and battery management systems, positioning itself at the forefront of advanced semiconductor technologies.
- 6) New Ventures:
- a) Clas-SiC Wafer Feb Ltd (Acquired 21.33% of equity share capital)
- b) Offgrid Energy Labs (Acquired 21% on a fully diluted basis)



Capability Matrix







Bromine

Overview	Archean's Position	End User Industries	Elemental Bromine Volume (Tonnes)	Segment Revenue Trend (Rs. Crores)
Bromine, a highly reactive halogen, is unique as the	Archean Chemical Industries Ltd. (ACIL) holds Advantage and provide a second	1) Pharmaceuticals: Bromine compounds are integral in synthesizing a variety of	Installed Capacity (merchant sales): 28,000 MTPA	708.4
only non-metallic element that remains in a liquid state under standard conditions.	a dominant position as a leading supplier of merchant bromine within	pharmaceuticals due to their reactivity and utility in the production of medicinal drugs.	Installed Capacity (Captive Consumption): 14,000 MTPA	700
This property, combined with its availability in natural sources like seawater,	India and exports approximately 48% of its bromine output to	 Agrochemicals: Used as a key component in pesticides and herbicides, bromine contributes to crop protection. 	Total Bromine Capacity: 42,000 MTPA	600
underground brine deposits, and other saline water reservoirs, makes bromine	international markets.ACIL's bromine production is based on a solar	3) Flame Retardants: Due to its non- combustible properties, bromine is critical in manufacturing flame	25,000 20,200	500 427.4
exceptionally valuable. It is a critical component in a wide	evaporation method, harnessing sustainable	retardants, which are essential for fire safety in industries such as electronics	20,000 18,950 17,300	344.4
array of applications, particularly in industries that rely on its flame-retardant	energy sources and minimizing its ecological footprint. This	and construction.4) Water Treatment: Bromine's disinfectant properties make it suitable for water	15,000 9,500	215.5
and disinfectant properties. With thousands of documented applications,	environmentally responsible production process has enabled ACIL	treatment and sanitation, particularly in industrial and municipal settings. 5) Oil & Gas and Energy Storage: Bromine	5,000	200
bromine plays a crucial role in the safety, health, and	to secure long-term partnerships with clients	compounds are used in oil and gas drilling fluids and high-density brines,	-	100
agricultural sectors.	who prioritize sustainability alongside quality.	and emerging uses include energy storage applications, such as zincbromine batteries.	KANY KANZ KANY MKANZ	0 FY20 FY21 FY22 FY23 FY24



Bromine derivatives

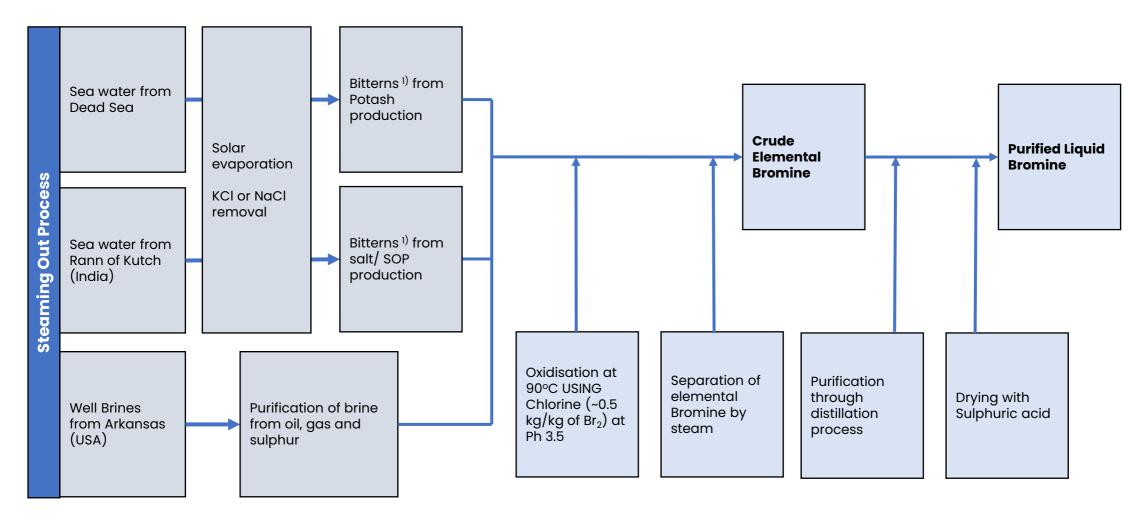
Installed Elemental Bromine Capacity of 14,000 MTPA is used for the production of Bromine Derivatives

	Oren Hydrocarbons Pvt Ltd		
High-end Flame Retardant	Clear Brine Fluids (CBF)	Pure Terephthalic Acid (PTA) Synthesis	Mud chemicals
Installed Capacity: 10,000 MTPA	Installed Capacity: 13,000 MTPA	Installed Capacity: 5,000 MTPA	
Brominated flame retardants (BFRs) belong to a large class of compounds known as organohalogens. BFRs are currently the largest marketed flame retardant group due to their high performance efficiency and low cost. This segment is currently on hold.	The company has seen an encouraging Initial response on Clear Brine Fluid (CBF). They have already dispatched a few trials and small orders to clients. They are engaging with clients to conduct further trials and define their specific requirements.	Polyester derived from PTA synthesis has extensive applications across various industries, particularly in textiles and packaging.	Caters to the requirements of High-quality Specialized Mud Chemicals (lubricants and drilling fluids) used in the exploration and development of Oil & Gas fields.





Bromine Production Process – Br₂ (Steaming Out Process)



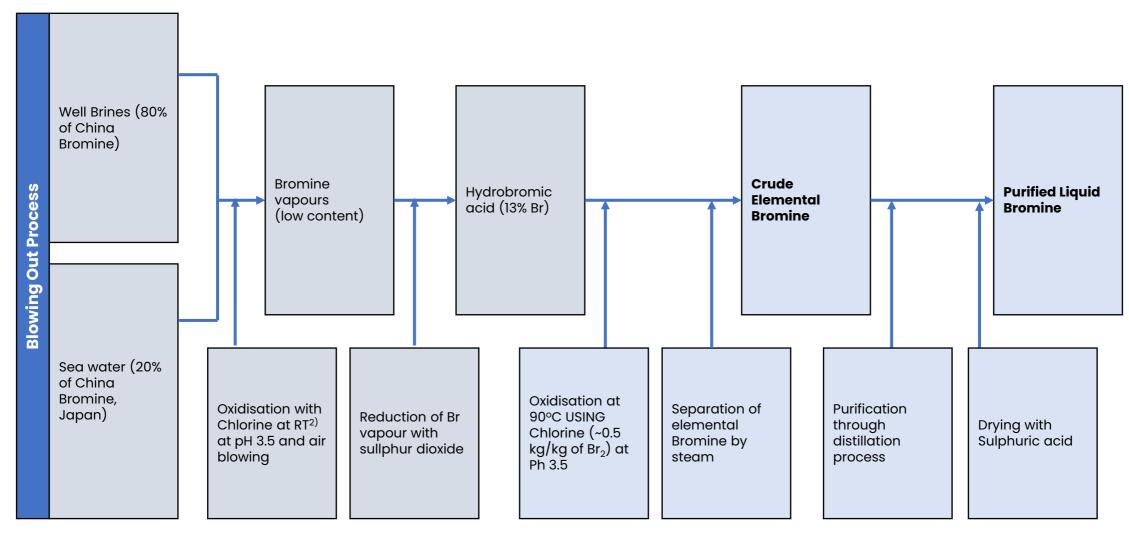
1) The Bittern liquid remaining after salt (in this case sodium chloride or potassium chloride) has been crystalised out of sea water







Bromine Production Process - Br₂ (Blowing Out Process)



2) RT: Room Temperature





Industrial salt

Overview	Archean's Position	End User Industries	Industrial Salt Volume (Lakh Tonnes)			Seç	gment Revenue [.] Crores)	Trend (Rs.		
Industrial salt, primarily composed of sodium	ACI's industrial salt production is entirely	1) Chloralkali Chemicals: Industrial salt is the primary input in the					900.0		840.1	
chloride (NaCl), is one of the most widely used industrial	export-driven. Produced through	production of chlorine and caustic soda, essential chemicals in	45		40.20	42.50		800.0		728.1
chemicals globally. With over 14,000 known applications,	solar evaporation, Archean's industrial	numerous downstream processes.	35	35.90				700.0		ш
industrial salt serves as a precursor to chlorine and caustic soda production,	salt production method is eco-friendly, requiring minimal	2) Food & Beverage: Industrial salt is widely used in food processing and preservation due to its low cost and	30					600.0		
both of which are essential chemicals in manufacturing	energy input and reducing the	effectiveness in enhancing flavor and shelf life.	25					500.0	512.	9
processes. Industrial salt is a core raw material for	environmental impact. This production	3) Water Treatment: Industrial salt	20					400.0	352.0 363.7	ш
industries ranging from food processing to chemicals and oil & gas. It also has	approach aligns with ACIL's sustainability goals and enhances	plays a vital role in water softening, an essential process in both residential and industrial settings.	15				14.52	300.0	ш	ш
substantial applications in water treatment, where it	its appeal to environmentally	4) Oil & Gas: Industrial salt is used in	10					200.0	ш	ш
aids in the softening of water and is used in desalination plants.	conscious clients.	drilling operations as an additive in drilling mud, which helps control fluid density and stabilize the	5					100.0	ш	Ш
		borehole.		FY22	FY23	FY24	H1FY25	_	FY20 FY21 FY22	2 FY23 FY24





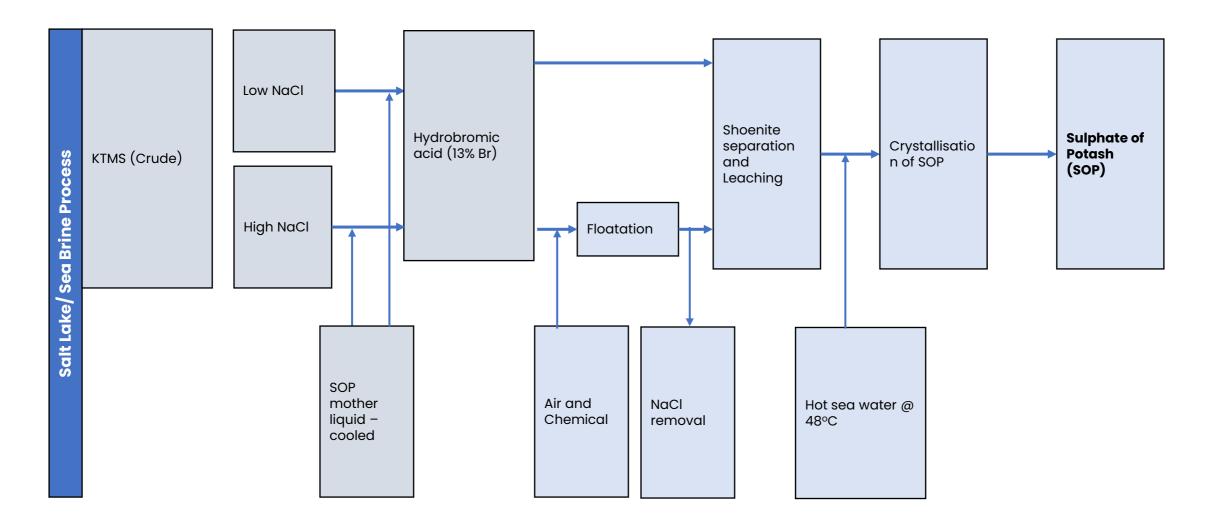
Sulphate Of Potash (SOP)

Overview	Archean's Position	End User Industries	SOP Volume (Tonnes)		Segment Revenue Trend (Rs. Crores)		
Sulfate of Potash (SOP), chemically known as potassium sulfate, is a	As the only SOP manufacturer in India to produce this compound from natural sea brine, ACI occupies a unique position in the	Agrochemicals: Primarily used as a high-end fertilizer for	Installed (Capacity: 1	,30,000 Tonnes	45.0	
high-value, specialty	market. Approximately 70% of its SOP	chloride-sensitive	10,000			40.0	9.5
fertilizer with low chloride content, ideal for	production is directed toward exports, reflecting strong international demand.	crops, including fruits, vegetables, and	9,000	8,84	40 8,200	35.0	36.0 32.5
chlorine-sensitive crops. SOP provides essential	However, ACI's SOP output has encountered challenges due to variations in kainite-type	tobacco.	8,000			30.0	
potassium to crops, improving quality and yield, and is preferred for	mixed salt (KTMS) quality, with higher sodium chloride content affecting production levels in recent years.	2) Glass and Cosmetics: SOP's purity makes it suitable for high-end	7,000 6,000			25.0	
use on high-value crops such as fruits,	The company is collaborating with German	applications, such as specialty glass	5,000			20.0	
regetables, tobacco, and tea. Unlike muriate	partners and Australian consultants, having completed lab trials in Germany. Pilot tests are	manufacturing and cosmetic formulations.	4,000			15.0	11.4
of potash (MOP), SOP is	scheduled in the coming months, with plant-			2,400		10.0	
ess likely to cause soil calinity, making it more	scale testing planned in Gujarat before the next monsoon. Necessary modifications will	3) Medical Applications: Potassium sulfate is	2,000			5.0	3.1
suitable for long-term crop sustainability.	be implemented, and the company remains optimistic about SOP production due to strong demand and limited producers of this grade SOP, particularly from natural sea brine. Positive updates are expected in the coming year.	also used in select medical formulations due to its potassium content and purity.		FY22 FY2	93 3 FY24 H1FY25	- FY	/20 FY21 FY22 FY23 FY24





Sulphate Of Potash Production Process – K₂SO₄





New Investments

ACI has embarked on a strategic diversification initiative by investing in Clas-SiC Wafer Fab Limited, a UK-based company specializing in Silicon Carbide (SiC) devices.

- 1. Overview of Clas-SiC Wafer Fab Ltd: Clas-SiC Wafer Fab, incorporated in June 2017, is a dedicated Silicon Carbide wafer foundry based in the UK. The company focuses on developing advanced SiC (silicon carbide) process modules and design kits, with specialization in SiC MOSFETs (Metal-Oxide-Semiconductor Field-Effect Transistors) and diodes. These components are integral to energy-efficient and green technologies, finding critical applications in:
- Electric Vehicles (EVs): Powertrain systems and charging infrastructure.
- Renewable Energy Systems: Solar inverters and wind turbines.
- Industrial Power Electronics: Heavy machinery, automation systems, and motor drives.
- Data Centers and Telecom: High-performance power supplies for reducing energy loss and cooling costs.
- 2. Rationale for Investment: Strategic Alignment with Semiconductors: ACI has invested in Clas-SiC Wafer Fab, marking India's first investment in a company specializing in Silicon Carbide (SiC) MOSFET and device manufacturing. Through its step-down subsidiary, SiCSem Pvt Ltd (SiCSem), Archean is entering the compound semiconductor space, focusing on SiC—a material recognized for its superior performance in high-voltage, high-temperature, and high-frequency applications. SiC-based components are indispensable for industries seeking energy efficiency, reliability, and sustainability. ACI's investment in Clas-SiC Wafer Fab secures technology exclusivity within India, granting the company a competitive advantage. This strategic move enhances ACI's ability to meet the increasing domestic demand for semiconductors while establishing a foothold in international markets.
- **4. Strategic Objectives, Synergies and Outcomes:** SiCSem is Archean's vehicle for expanding into the high-growth semiconductor sector. Partnerships secured by SiCSem include:
- Clas-SiC Wafer Fab (UK): Process technology and design kits.
- NoMIS Power (USA): Device design and qualification for automotive and industrial sectors.
- Aixtron (Germany): Equipment for SiC epitaxial film deposition.
- IIT Bhubaneswar: Collaboration on SiC crystal growth.



- 4. Synergy with investment for R&D research with IIT Bhubaneshwar: Archean has collaborated with IITBhu to research on how to produce silicon carbide crystals. This is a pioneering effort in India, and only a few globally have undertaken such a comprehensive initiative within the semiconductor industry, combining crystal growth and commercial development. ACI's goal is to integrate research efforts with the commercial development of a silicon carbide wafer fab. This synergy will allow them to manage both silicon carbide crystal growth and wafer fabrication.
- 5. Investment Structure: The investment in Clas-SiC Wafer Fab is structured as a cash-based transaction. It involves a primary subscription of GBP 10 Mn and a secondary purchase of GBP 5 Mn (~Rs. 160 Cr cumulatively). Together, this results in ACIL acquiring a 21.33% equity stake in Clas-SiC Wafer Fab Limited.
- 6. Financial Performance of Clas-SiC: The company's turnover was ~ Rs. 109 Cr (GBP 10.01 Mn) in FY24, slightly lower than ~ Rs. 116 Cr (GBP 10.65 Mn) recorded in FY23, but significantly higher than ~ Rs. 22 Cr (GBP 2.04 Mn) achieved in FY2022.
- 7. Proposed Manufacturing Facility: SiCSem plans to establish a state-of-the-art SiC manufacturing plant in Odisha. This facility will cater to domestic and international markets, with operations targeted to commence within 24-36 months. SiCSem has also submitted an application under the Indian Semiconductor Mission, currently awaiting approval.

8. Points to Note:

- The road map from concept to commercialization will take between 2 to 3 years as a part of the first phase.
- The agreement on investment with Clas-Sic is only on the exclusivity of the technology tie-up for India. In terms of manufacturing and sales, ACI is not bound by any agreement. That's purely the company's prerogative.
- 9. Market Size and Outlook: Presently, overall global market size would be around ~ Rs. 16,800 Cr (\$2+ Bn), and it is expected to grow at a CAGR of more than 25% till 2030 reaching ~ Rs. 84,000 Cr (\$10+ Bn).







New Investments

Archean has invested in Delaware based Offgrid Energy Labs, a company specializing in battery technology through their patented Zinc Bromide batteries.

- 1. Overview of Offgrid Energy Labs: Offgrid Energy Labs, a Delaware-based company, specializes in proprietary zinc-bromide battery technology and is developing advanced energy storage solutions tailored to the demands of renewable energy and industrial applications. Founded in June 2024, Offgrid's flagship product, ZincGel® batteries, is backed by patented technology that offers superior performance, safety, and cost advantages compared to traditional lithium-ion batteries.
- The company's ZincGel® batteries are designed to address the growing need for energy storage systems that can endure daily charge-discharge cycles, making them ideal for commercial and industrial solar applications, utility-scale grid stabilization, and low-power mobility solutions like electric scooters. With a cycle life of up to 7,500 cycles, these batteries surpass the longevity of lithium-ion alternatives, while being non-flammable and resistant to overheating, enhancing their safety profile.
- Offgrid's approach leverages zinc and bromine—materials that are abundant and cost-effective—offering a sustainable and economical solution for energy storage.
- 2. Synergies with Core Bromine Business: Zinc-bromide chemistry is a fundamental component of Offgrid's ZincGel® batteries, creating a natural synergy with ACI's core bromine business. This alignment enables ACI to integrate its bromine production into high-value applications, driving operational efficiency and creating a direct link between its chemical production and the burgeoning battery market.
- 3. Investment Details and Financial Structure: Archean's investment totals \$12 million (~Rs. 100 Cr) in cash as part of Offgrid's Series A fundraising. The transaction will secure ACIL a 21% equity stake on a fully diluted basis, granting influence over Offgrid's strategic direction.

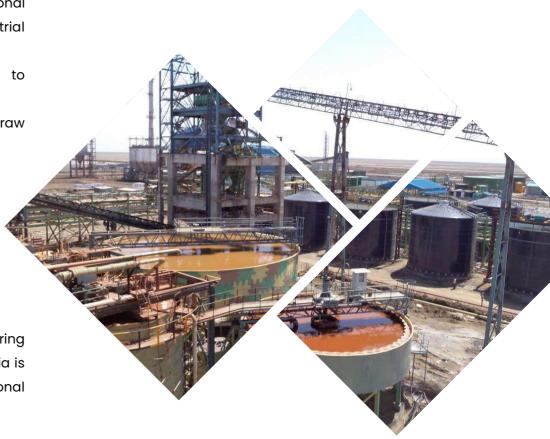


4. Key Features of ZincGel® Battery Technology

- Extended Cycle Life: ZincGel® batteries offer a cycle life of up to 7,500 cycles, outperforming traditional lithium-ion batteries, making them ideal for daily charge-discharge in commercial and industrial (C&I) solar applications as well as utility-scale grid stability projects.
- **Safety:** Zinc-bromide batteries are inherently safer, being non-flammable and resistant to overheating, addressing key safety challenges associated with lithium-ion alternatives.
- **Cost-Effectiveness:** Utilizing abundant and cost-efficient elements like zinc and bromine reduces raw material costs, making ZincGel® batteries economically competitive.

5. Target Applications:

- · Renewable energy storage for solar and wind systems.
- · Utility-scale grid stabilization projects.
- Commercial and industrial (C&I) solar applications.
- · Low-power mobility solutions, such as electric scooters.
- **5. Pilot and Giga-Factory Development:** ACI is supporting the establishment of a pilot manufacturing facility in the UK to validate and scale production processes. Subsequently, a giga-factory in India is planned, enabling large-scale production to cater to the growing domestic and international demand for ZincGel® batteries.
- 6. Market Opportunity: The global stationary energy storage market is projected to exceed ~Rs. 2.5 Lakh Crores (\$30 billion) by 2030, driven by renewable energy integration and grid modernization efforts. In India alone, the year 2024 witnessed tenders for over 7 GWh of battery energy storage systems (BESS), valued at approximately ~Rs. 8400 Cr (\$1 Bn), underlining the immense potential of the domestic market.





Financials And Projections

Income Statement (Rs. Cr)	FY23	FY24	FY25e	FY26e	FY27e	3 Yr cagr
Revenue from operations	1,441	1,330	1,159	1,734	2,189	18.1%
Other income	43	43	43	48	52	
Total Income	1,484	1,373	1,203	1,782	2,242	17.7%
Less: Expenses	807	867	799	1,214	1,554	
EBITDA	634	463	360	520	635	11.1%
EBITDA Margin	44.0%	34.8%	31.1%	30.0%	29.0%	
Less: D&A	69	70	64	65	68	
EBIT	565	392	297	455	566	13.0%
Finance Cost	97	8	9	6	2	
РВТ	512	427	331	496	617	13.0%
Less: Tax Expense	129	108	83	124	154	
Tax Rate	25%	25%	25%	25%	25%	
PAT	383	319	249	372	463	13.2%
PAT Margin	26.5%	24.0%	21.4%	21.5%	21.1%	
EPS	34.6	25.9	20.1	30.2	37.5	



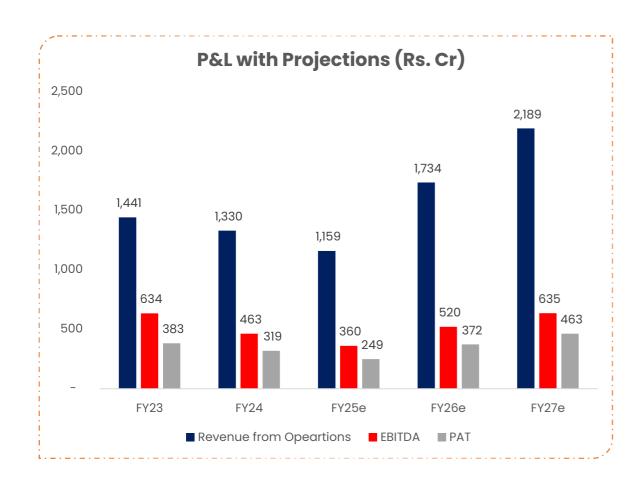


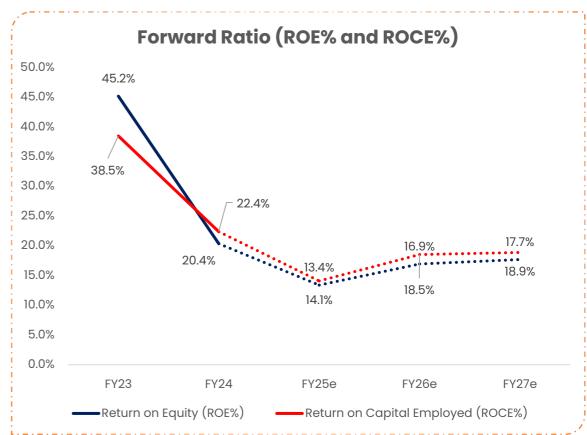
Balance Sheet (Rs. Cr)	FY23	FY24	FY25e	FY26e	FY27e
EQUITY AND LIABILITIES					
Share Capital	24.6	24.7	24.7	24.7	24.7
Reserves	1,406	1,677	1,987	2,360	2,822
Borrowings	91	122	163	120	40
Other Liabilities	234	232	240	294	336
TOTAL EQUITY AND LIABILITIES	1,755	2,056	2,415	2,798	3.223
ASSETS					
Fixed Assets	1,110	1,160	1,210	1,244	1,301
Capital Work-in-progress	36	48	98	98	98
Cash & Cash Equivalents	33	45	111	185	320
Investments	210	350	628	766	892
Other Assets	366	453	368	505	613
TOTAL ASSETS	1,755	2,056	2,415	2,798	3,223

Free Cash Flow Analysis (Rs. Cr)	FY23	FY24
Cash Flow from Operations	496	379
Сарех	92	108
Finance Charges	97	9
Direct Taxes Paid	129	108
Free Cash Flow to Firm (FCFF)	178	154



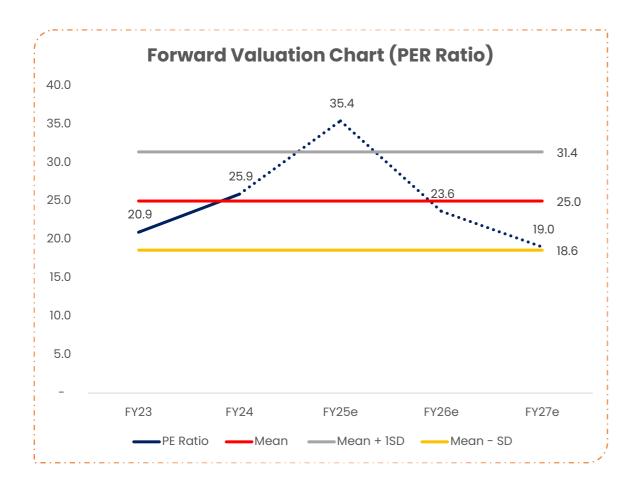
Story In Charts

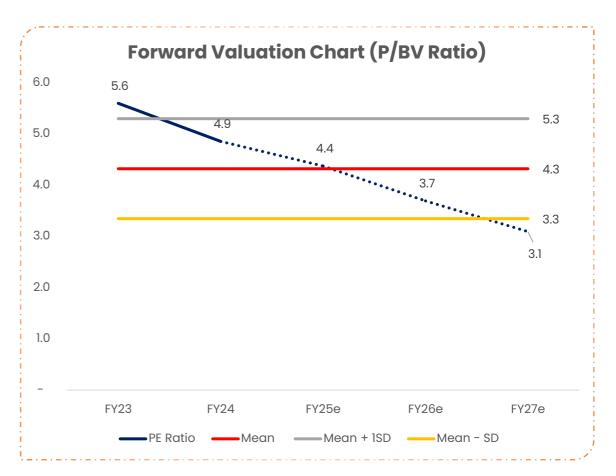






Story In Charts







Financial Ratios

Du Pont Analysis	FY23	FY24	FY25e	FY26e	FY27e
Profit/Sales	0.27	0.24	0.21	0.21	0.21
Sales/Assets	0.88	0.70	0.52	0.67	0.73
Sales/Net Fixed Assets	1.31	1.17	0.98	1.41	1.72
Assets/Net Worth	1.94	1.22	1.20	1.19	1.15
Return on Equity (ROE %)	45.2%	20.4%	13.4%	16.9%	17.7%

Valuation Ratios	FY23	FY24	FY25e	FY26e	FY27e
P/E (x)	20.9	25.9	35.4	23.6	19.0
P/BV (x)	5.6	4.9	4.4	3.7	3.1
EV/EBITDA (x)	12.7	18.1	24.6	16.8	13.4
MCAP/Sales (x)	5.6	6.2	7.6	5.1	4.0

Other Metrics and Ratios	FY23	FY24	FY25e	FY26e	FY27e
EPS	31.1	25.8	20.1	30.2	37.5
EPS growth YoY		-17%	-22%	+50%	+24%
ROCE (%)	38.5%	22.4%	14.1%	18.5%	18.9%
Book Value per Share	116.3	137.9	163.1	193.2	230.7
Debt to Equity ratio	0.1	0.1	0.1	0.1	0.0



Risks & concerns

- Volatility in Product Realizations: The Bromine segment after witnessing a 2x increase in realizations between FY18 and FY23, saw prices declined by 35% in FY24, elongated moderation is expected in FY25. Despite fixed-price contracts, these fluctuations significantly impact revenue and profitability. While Industrial Salt segment's performance has been robust, reliance on fixed-price contracts for 12-24 months and market dynamics contribute to potential variability. Overall revenues fell by 7% due to an 8% drop in bromine volumes, and although industrial salt growth partially offset this decline, operating profitability decreased from 44% in FY23 to 34.8% in FY24. Mitigation efforts include the use of simple forward contracts, but exposure to global pricing trends remains a concern.
- **Customer Concentration:** Approximately 70% of ACIL's revenue in FY24 came from its top 10 customers, with Sojitz Corporation alone contributing 25%. The industrial salt segment has only 4-5 major clients, with Sojitz accounting for 60-65% of revenues in this segment.
- **Product Concentration:** Revenue contribution was dominated by industrial salt (63%) and bromine (32%) in FY24. While there is diversity in bromine's end-user base, concentration risks in industrial salt remain high. Diversification efforts, including ramping up bromine derivatives and SOP production, aim to reduce this reliance.
- **Vulnerability to Climatic Conditions:** ACI operates a single manufacturing facility in Hajipur, Gujarat, which is prone to adverse weather conditions. Heavy rains during the monsoon dilute sea brine, reducing bromine yields, and lead to logistical challenges with the closure of the Jakhau Jetty. Archean recorded exceptional items due to Cyclone Asna in Q2FY25, the cyclone caused a loss of Industrial salt stock of Rs. 40.18 Cr (4.72 Lakh MT). Turbulent weather conditions this past monsoon caused delays in production, this coupled with difficult transport conditions, made exports transport from the production facility to the ports very difficult.
- Land Lease Renewal Risk: ACI's facility and brine reserves are on leased land, and the lease agreement with the Gujarat government expired in 2018. Although renewal applications have been filed, any disruption or denial of renewal could severely impact operations, requiring relocation or shutdown.
- **Global Competition:** The company faces intense competition from low-cost producers, particularly in China. Cheaper imports and reduced global tariffs under WTO agreements pose challenges to maintaining market share and profitability.
- Foreign Exchange Risk: With over 70% of revenue derived from exports and significant raw material imports, ACI is exposed to foreign currency fluctuations. While hedging mechanisms such as forward contracts help mitigate this risk, currency volatility remains a factor that can influence financial performance.





Peer comparison

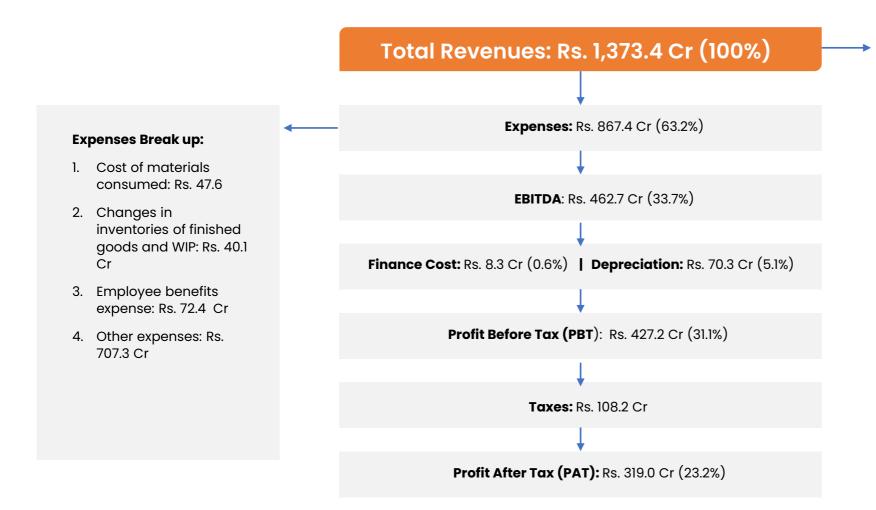
Company	Market Cap (Rs. Cr)	PE Ratio (TTM)	ROE% (TTM)	ROCE% (TTM)	EBITDA Margin (Q2FY25%)
Archean Chemical Industries Ltd	8,789	33.2	19.3%	25.0%	31%
Tata Chemicals Ltd	28,794	47	2.3%	7.8%	15%
Deepak Nitrite Ltd	37,606	47.3	16.4%	21.6%	15%
Aarti Industries Ltd	16,098	36.3	8.2%	7.5%	12%
Neogen Chemicals Ltd	5,676	140	5.7%	9.4%	18%

- 1. Tata Chemicals Ltd: Incorporated in 1939, Tata Chemicals Ltd manufactures and exports basic chemistry and specialty products. Part of the Tata Group, the company has a strong market share in the global soda ash industry, with presence in India, North America, Europe and Africa and diversified product profile divided into basic chemistry products and specialty products segments. TCL is third largest soda ash producer globally, with over two-third of its capacity being natural soda ash translating into cost-effective production. TCL is also the 6th largest producer of sodium bicarbonate in the world, and one of the leading agri-services and crop-protection chemical companies in India (through Rallis India Limited). Key products include soda ash, soda bicarbonate, cement, salt, marine chemicals and crushed refined soda, and halogen products.
- 2. Deepak Nitrite Ltd: Incorporated in 1970, Deepak Nitrite Ltd manufactures Basic Intermediates, Fine & Speciality Chemicals, Performance Products, and Phenolics. Deepak Nitrite has a ~75% market share in sodium nitrite, sodium nitrate, and NitroToluenes in India. The company has been successful in substituting the majority of the local market imports of Phenol and Acetone and attained a market share of about ~50%. It is also among the top three global players for xylidines, cumidines, and oximes.
- 3. Aarti Industries Ltd: Aarti Industries Ltd, the flagship company of the Aarti group, manufacturing organic and inorganic chemicals at its major facilities in Vapi, Jhagadia, Dahej and Kutch, in Gujarat and in Tarapur in Maharashtra. The company has a strong market position in the NCB-based specialty chemicals segment. Company manufactures speciality chemicals in Benzene based derivatives. Key value chains include Nitro Chloro Benzenes (NCBs), Di-Chloro Benzenes (DCBs), Phenylenediamines (PDAs), Nitro Toluene Value Chain and Equivalent Sulphuric Acid (E.S.A) & downstream.
- 4. Neogen Chemicals Ltd: Neogen Chemicals Ltd, incorporated in 1991, manufactures bromine and lithium-based organic and organo-metallic compounds, used in the pharmaceutical, agricultural chemicals, and engineering industries. In organic chemicals, Neogen manufacters Bromine Compounds and Advanced Intermediates. It is also into Custom Synthesis and Contract Manufacturing wherein products are developed for specific customers. Under the inorganic Chemicals segment they produce specialty inorganic, lithium-based chemical products.



Income Statement Flow Chart

(As of FY'24 - figures in Rs. Crores)



Revenue Break Up:

- 1. Revenue from operations: Rs. 1,330.1 Cr (96.8%)
- 2. Other Income: Rs. 43.3 Cr (3.2%)

Revenue from Operations break up:

- 1. Marine chemicals:
- a. Salt: Rs. 840.1 Cr
- b. Bromine: Rs. 427.4 Cr
- c. Sulphate of Potash: Rs. 36.0 Cr
- 2. Bromine Derivatives: Rs. 0.5 Cr
- 3. Others: Rs. 26.1 Cr



Balance Sheet

as on 31st March 2024 (Rs. In Cr)



Fixed Assets (Net Block)	Rs. 1,161.7 Cr
Capital WIP	Rs. 46.2 Cr
Cash & Cash Equivalents	Rs. 45.5 Cr
Other Assets	Rs. 802.5 Cr



Share Capital	Rs. 24.7 Cr
Reserves	Rs. 1,676.9 Cr
Borrowings	Rs. 121.9 Cr
Other Liabilities	Rs. 232.4 Cr





Industry outlook

- Overview of the Indian Chemical Industry: The Indian chemical industry ranks as the sixth-largest producer of chemicals worldwide and the third-largest consumer of polymers. In 2022, the industry was valued at ~Rs. 18.5 Lakh Crores (\$220 billion), accounting for 3.4% of the global chemicals industry and contributing 7% to India's GDP. With strong domestic demand and export potential, this sector is expected to grow to ~Rs. 25.2 Lakh Crores (\$300 billion) by 2025 and a staggering ~Rs. 84 Lakh Crores (\$1 trillion) by 2040, driven by rapid industrialization, a growing middle class, and competitive manufacturing costs. Its robust growth trajectory positions India as a vital hub for global chemical production and consumption.
- Specialty Chemicals: A Key Growth Driver: The specialty chemicals segment is the most dynamic part of the Indian chemical industry, projected to grow at a CAGR of 12.4%, doubling from ~Rs. 2.7 Lakh Crores (\$32 billion) in 2019 to ~Rs. 5.4 Lakh Crores (\$64 billion) by 2025. This growth is fueled by increasing demand from industries such as food processing, personal care, and home care. Collaborative efforts, such as the MoU between the Indian Specialty Chemical Manufacturers' Association (ISCMA) and the United States-India Importers' Council (USIIC), further promote trade and innovation, strengthening India's position in the global specialty chemicals market.
- Industry Significance and Global Standing: The chemical sector is a vital contributor to India's economy, representing 7% of GDP and ranking among the fastest-growing industries.

 According to an industry report, India's demand for chemicals and petrochemicals is expected to triple by 2040, reflecting the industry's increasing significance. With its competitive operational costs and growing presence of niche specialty firms, India is well-positioned to meet both domestic and global demand. However, challenges such as limited access to raw materials, infrastructure bottlenecks, and skilled labor shortages persist, which the industry must address to maintain its competitive edge.
- Segment-Specific Opportunities
- 1. **Bromine Market:** The global bromine market, valued at ~Rs. 23,000+ Crores (\$2.8 billion) in 2022, is anticipated to grow to ~Rs. 40,000 Crores (\$4.7 billion) by 2033, at a CAGR of 2.7%. This growth is driven by its applications in flame retardants, oil & gas drilling, and water treatment. The Asia-Pacific region, led by India and China, is expected to dominate the bromine market due to increasing demand from electronics, automotive, and pharmaceutical sectors.
- 2. Industrial Salt Market: Valued at ~Rs. 1.24 Lakh Crores (\$14.7 billion) in 2023, the industrial salt market is expected to grow at a CAGR of 4.0% over the next decade. It finds applications in de-icing, chemical processing, solar energy, and water treatment. India, with its abundant salt reserves and strategic location, is well-positioned to meet global demand efficiently.
- 3. Sulphate of Potash (SOP) Market: The global SOP market is poised for significant growth, expected to reach ~Rs. 45,000 Crores (\$5.4 billion) by 2027, at a CAGR of 4.8% (2022-2027). SOP's versatility, particularly as a high-efficiency fertilizer for chlorine-sensitive crops, drives demand in agriculture, pharmaceuticals, cosmetics, and food processing. The Asia-Pacific and Latin America regions are key growth areas, supported by urbanization and increased focus on food security.





Industry outlook

• Government Policies and Support: The Indian government has undertaken multiple initiatives to support the growth of the chemical sector. The Union Budget allocated ₹192.21 crore (\$23.13 million) to the Department of Chemicals and Petrochemicals. Additionally, PLI schemes for advanced battery storage and bulk drug parks, with a budget of ₹1,629 crore (\$213.81 million), have been approved. Projects such as the Petroleum, Chemicals, and Petrochemicals Investment Region (PCPIR) at Paradip and Dahej have attracted significant investments, with the Dahej PCPIR project alone securing ₹1 lakh crore (\$12 billion) and generating 32,000 jobs. These initiatives highlight the government's commitment to strengthening infrastructure and enabling growth across the chemical sector.

Opportunities in the Industry

- 1. Specialty Chemicals: Expanding product portfolios to include polymer additives, lubricant additives, and water treatment chemicals can address the rising demand for value-added products.
- 2. Export Markets: Emerging regions like Asia-Pacific and Africa present significant growth opportunities for Indian chemical manufacturers.
- 3. Fine and Specialty Chemicals: Venturing into fine chemicals leverages India's technical expertise and cost advantages, bypassing challenges like high capital costs and limited hydrocarbon availability.
- 4. De-risking Supply Chains: With global companies diversifying their supply chains away from China, India has a prime opportunity to emerge as a preferred supplier.
- 5. Regional Growth: The Dahej PCPIR project in Gujarat, with 180 operational units and 650 under construction, exemplifies India's capacity for industrial expansion.
- Industry Outlook: The Indian chemical industry is on a robust growth trajectory, driven by rising demand, technological advancements, and favorable government policies. While challenges such as raw material shortages, infrastructure limitations, and skilled labor gaps persist, the industry's focus on innovation, collaboration, and product diversification presents a promising outlook. By leveraging its strengths and addressing existing challenges, India is poised to become a global hub for chemical manufacturing, contributing significantly to economic development and value creation in the years to come.





Historical financials

Income Statement (Rs. Cr)	FY23	FY24	H1FY25
Revenue from operations	1,441	1,330	453
Other income	43	43	21
Total Income	1,484	1,373	474
Less: Expenses	807	867	307
EBITDA	634	463	146
EBITDA Margin	44.0%	34.8%	32.2%
Less: D&A	69	70	38
EBIT	565	392	108
Finance Cost	97	8	5
Profit Before Tax & Exceptional Items	512	427	124
Exceptional Items	-	-	(40)
Profit Before Tax	512	427	83
Less: Tax Expense	129	108	23
Tax Rate	25.2%	25.3%	27.3%
PAT	383	319	61
PAT Margin	26.5%	24.0%	13.4%
Diluted Earnings Per Share (EPS)	34.6	25.9	4.9

Balance Sheet (Rs. Cr)	FY23	FY24	H1FY25
EQUITY & LIABILITIES			
Share Capital	25	25	25
Reserves	1,406	1,677	1,739
Borrowings	91	122	163
Other Liabilities	234	232	232
TOTAL EQUITY & LIABILITUES	1,755	2.056	2.158
ASSETS			
Fixed Assets	1,110	1,160	1,223
Capital Work – in – progress	36	48	98
Cash & Cash Equivalents	33	46	46
Investments	210	349	418
Other Assets	366	453	374
TOTAL ASSETS	1,755	2.056	2.158





Geography Split

Revenue from Operations (Rs. Cr)	FY23	%	FY24	%
India	396	27%	370	28%
Rest of the world	1,045	73%	960	72%
Total Revenue from Operations	1,441	100%	1,330	100%

Common Size Income St.	FY23	FY24	H1FY25
Revenue from operations	97.1%	96.8%	95.6%
Other income	2.9%	3.2%	4.4%
Total Income	100.0%	100.0%	100.0%
Less: Expenses	54.4%	63.2%	64.8%
EBITDA	42.7%	33.7%	30.8%
Less: D&A	4.6%	5.1%	8.0%
EBIT	38.1%	28.6%	22.8%
Less: Finance Cost	6.5%	0.6%	1.0%
PBT & Exceptional Items	34.5%	31.1%	26.1%
Exceptional items	0.0%	0.0%	-8.5%
PBT	34.5%	31.1%	17.6%
Less: Tax expense	8.7%	7.9%	4.8%
PAT	25.8%	23.2%	12.8%

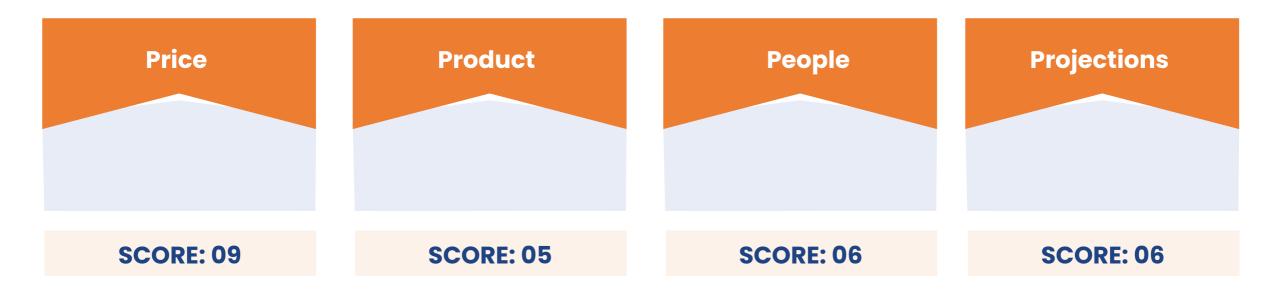
Product Split

Revenue from Operations (Rs. Cr)	FY23	%	FY24	%
Industrial Salt	728	51%	840	63%
Bromine	708	49%	427	32%
Sulphate of Potash (SOP)	3	0%	36	3%
Bromine Derivatives	0	0%	1	0%
Others	2	0%	26	2%
Total Revenue from Operations	1,441	100%	1,330	100%

Common Size Balance Sheet	FY23	FY24	H1FY25
EQUITY AND LIABILITIES			
Share Capital	1.4%	1.2%	1.1%
Reserves	80.1%	81.6%	80.6%
Borrowings	5.2%	5.9%	7.5%
Other Liabilities	13.3%	11.3%	10.8%
Total	100.0%	100.0%	100.0%
ASSETS			
Fixed Assets	63.2%	56.4%	56.7%
CWIP	2.1%	2.3%	4.5%
Cash and Cash equivalents	1.9%	2.2%	2.1%
Investments	12.0%	17.0%	19.4%
Other Assets	20.9%	22.0%	17.3%
Total	100.0%	100.0%	100.0%



Stock Selection Criteria – P^4 (PPPP) = A Winning Grid



Sources:

Date: 03 Dec. 2024:



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Regd. Office: Chola Crest, C54 - 55 & Super B-4, Thiru-Vi-Ka Industrial Estate, Guindy, Chennai - 600032.

Website: www.cholasecurities.com | Email id - csecsupport@chola.murugappa.com

RESEARCH					
Dharmesh Kant	Head of Equity Research	+91- 44 - 4004 7360	dharmeshkt@chola.murugappa.com		
Balaji H	Compliance Officer	044 - 30007226	balajih@chola.murugappa.com		
Prem Kumar R	Customer service	1800 425 4477	premkumarram@chola.murugappa.com		

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