

## Issue highlights

- Archean Chemical Industries Ltd (“Archean”) was incorporated on November 20, 2003. Archean is a leading specialty marine chemical manufacturer in India and focused on producing and exporting **bromine, industrial salt, and sulphate of potash** to customers around the world. Archean is the largest exporter of bromine and industrial salt in India in Fiscal 2021 and has amongst the lowest cost of production globally in both bromine and industrial salt.
- The company produces their products from their brine reserves in the Rann of Kutch, located on the coast of Gujarat, and manufacture products at their facility near Hajipir in Gujarat. As of June 30, 2022, they marketed their products to 18 Global customers in 13 countries and to 24 domestic customers.
- The bromine is used as a key initial level material, which has applications in the pharmaceuticals, agrochemicals, water treatment, flame retardant, additives, oil & gas, and energy storage batteries **Archean commands a leadership position in Indian bromine merchant sales (traded bromine in the market) by volume in Fiscal 2021.**
- Industrial salt is the principal material in chlorine and caustic soda production (together, known as chloralkali) and is widely used in the chemical and food and beverage industries. **Archean exported 100% of their industrial salt production**, primarily to customers in Japan and China.
- Sulphate of Potash**, also known as potassium sulphate, is a high-end, specialty fertilizer for chlorine-sensitive crops and also has medical uses to reduce the plasma concentration of potassium when hypokalemia occurs. **Archean is the only manufacturer of sulphate of potash from natural sea brine in India.**
- Archean has an integrated production facility for their bromine, industrial salt, and sulphate of potash operations, located at Hajipir, Gujarat, which is located on the northern edge of the Rann of Kutch brine fields and it is located in close proximity to the captive Jakhau Jetty and Mundra Port.
- The transportation of bromine is also dangerous and requires nickel and lead lined ISO containers, of which they had 228 such containers (owned and leased) for their export business as of June 30, 2022.

## Brief Financial Details\*

(₹ In Cr)

	As at Jun' 30,		As at Mar' 31,		
	Consolidated	Standalone	Consolidated	Standalone	Consolidated
	2022(03)	2021(03)	2022(12)	2021(12)	2020(12)
Equity Share Capital	19.27	19.27	19.27	19.27	19.27
Reserves	326.17	71.72	241.80	53.12	(13.28)
Net worth	345.44	90.99	261.07	72.38	5.99
Revenue from Operations	400.27	200.76	1,130.44	740.76	608.17
Revenue Growth (%)	99.38%	-	52.61%	21.80%	-
EBITDA	169.61	81.06	479.54	276.25	156.83
EBITDA Margin (%)	42.37%	40.38%	42.42%	37.29%	25.79%
Profit before Tax	112.85	24.82	251.00	90.47	(16.69)
Net Profit for the period	84.41	18.69	188.58	66.61	(36.22)
Net Profit Margin (%)	21.09%	9.31%	16.68%	8.99%	(5.96)%
EPS – Basic & Diluted (₹)	8.17 <sup>^</sup>	1.81 <sup>^</sup>	18.26	6.45	(3.51)
RoNW (%)	24.44% <sup>^</sup>	20.54% <sup>^</sup>	72.24%	92.02%	(605.06)%
NAV (₹)	33.45	8.81	25.28	7.01	0.58
ROCE (%) <sup>^</sup>	11.71%	6.27%	34.62%	21.01%	11.24%
ROE(%) <sup>^</sup>	27.83%	22.88%	113.11%	169.98%	(149.80)%
Debt Equity Ratio	2.65	10.90	3.53	13.52	155.24

Source: RHP \*Restated Financial, <sup>^</sup> not annualised

## Issue Details

**Fresh Issue of Equity shares aggregating upto ₹ 805 Cr and offer for sale of 16,150,000 Equity Shares.**

**Issue size: ₹ 1,428 – 1,462 Cr**  
**No. of shares: 37,004,922 – 35,928,869**  
**Shares**  
**Face value: ₹ 2/-**

**Price Band: ₹ 386 - 407**  
**Bid Lot: 36 Shares** and in multiple thereof

**Post Issue Implied Market Cap = ₹ 4,791 – 5,008 Cr**

**BRLMs:** IIFL Securities, ICICI Securities, JM Financial

**Registrar:** Link Intime India Pvt Ltd.

**Issue opens on:** Wednesday, 9<sup>th</sup> Nov'2022

**Issue closes on:** Friday, 11<sup>th</sup> Nov'2022

## Indicative Timetable

Activity	On or about
Finalisation of Basis of Allotment	16-11-2022
Refunds/Unblocking ASBA Fund	17-11-2022
Credit of equity shares to DP A/c	18-11-2022
Trading commences	21-11-2022

## Issue break-up

	No. of Shares		₹ In Cr		% of Issue
	@Lower	@Upper	@Lower	@Upper	
QIB	27,753,692	26,946,653	1,071.29	1096.73	75%
NIB	5,550,738	5,389,330	214.26	219.35	15%
-NIB1	1,850,246	1,796,443	71.42	73.12	-
-NIB2	3,700,492	3,592,887	142.84	146.23	-
RET	3,700,492	3,592,886	142.84	146.23	10%
<b>Total</b>	<b>37,004,922</b>	<b>35,928,869</b>	<b>1,428.39</b>	<b>1,462.30</b>	<b>100%</b>

NIB-1=NII Bid between ₹ 2 to 10 Lakhs

NIB-2 =NII Bid Above ₹ 10 Lakhs

## Listing: BSE & NSE

## Shareholding (No. of Shares)

	Pre issue	Post issue <sup>~</sup>	Post issue <sup>^</sup>
	103,274,120	124,129,042	123,052,990

<sup>~</sup>Lower price Band <sup>^</sup>Upper Price Band

## Shareholding (%)

	Pre-Issue	Post-Issue
Promoters	65.58%	53.41%
Public – Investor Selling S/h	32.00%	15.36%
Public - Others	2.42%	31.23%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

## BACKGROUND

### Company and Directors

The company was originally formed as a partnership firm under the name of “Archean Chemical Industries” at Chennai, on November 20, 2003. Chemikas Speciality LLP, Ravi Pendurthi and Ranjit Pendurthi are the promoters of the company. Currently, the promoters collectively hold an aggregate of 67,724,755 Equity Shares, equivalent to 65.58% of the pre-Offer issued, subscribed and paid-up Equity Share capital of the company

### Brief Biographies of Directors

**Ranjit Pendurthi** is the Promoter and Managing Director of the company. He has been associated with the company since incorporation. He has 21 years of experience in the chemical business.

**Ravi Pendurthi** is the Promoter and Non-Executive Director of the company. He has 14 years of experience in the chemical industry.

**Subrahmanyam Meenakshisundaram** is the Non-Executive Director on the Board of the company. He has been associated with the company since incorporation. He has approximately 4 decades of experience in accounting, finance and tax. He was previously associated with Muljibhai Madhvani & Co. Limited, Chemplast Sanmar Ltd, Electronics Corporation of India Ltd and Mohan Breweries and Distilleries Ltd

**Padma Chandrasekaran** is the Independent Director on the Board of the company. She has several years of experience in various fields such as information technology and financial services. She is associated with various companies, including PNB Metlife India Insurance Co Ltd, Adani Capital Pvt Ltd and SKYFI Education Labs Pvt Ltd.

**Chittoor Ghatambu Sethuram** is an Independent Director on the Board of the company. He has over 3 decades of experience in chemical industry. He has been associated with Polyolefins Industries Ltd, Sanmar Speciality Chemicals Ltd, Pidilite Industries Ltd and Thirumalai Chemicals Ltd.

**Kandheri Munaswamy Mohandass** is an Independent Director on the Board of the company. He has over 4 decades of experience in audit, tax, project finance, corporate restructuring, and corporate laws advisory. He is a director on Aptus Value Housing Finance India Ltd.

### Key Managerial Personnel

**Bhupathi K** is the vice-president - operations and unit head of the company. He has been part of the company since November 20, 2021. He has 28 years of experience in spearheading production, maintenance, erection and commissioning, quality and projects with key focus on profitability.

**Gaurav Parashar** is the general manager- marketing and business development of the company. He has been part of the company since April 1, 2021. He has over a decade of experience in marketing and business development.

**Gnanavelu Arunmozhi** is the Company Secretary and Compliance Officer of the company. He has been a part of the company since May 12, 2022. He has 18 years of experience in corporate and secretarial compliance.

**Parthiban Selvaraj Muruganatha** is the associate general manager – transport and logistics of the company. He has been part of the company since April 1, 2019. He has 17 years of experience in shipping and port management.

**Raghunathan Rajagopalan** is the Chief Financial Officer of the company. He has been part of the company since June 1, 2022. He has more than a decade of experience in financial planning, budgeting and cash management.

**Rajeev Kumar** is the associate general manager- finance of the company. He has been part of the company since April 1, 2017. He has 12 years of experience in finance.

**Dr Ravi K** is the associate general manager- research and development of the company. He has been part of the company since January 1, 2021. He has 35 years of experience in contract research and custom synthesis projects.

**Sandra Marina Pais** is the general manager- people and culture of the company. She has been part of the company since July 1, 2021. She has 25 years of experience in human resource operations and organisational development.

**Subash Kasinathan** is the general manager- operations and strategic initiative of the company. He has been part of the company since October 11, 2010. He has 17 years of experience in process and project engineering.

**Vijayaraghavan Srinivasan** is the general manager- commercial and procurement of the company. He has been part of the company since August 1, 2015. He has 20 years of experience in operations, maintenance, project, and team management.

## OBJECTS OF THE ISSUE

Objects	(₹ In Cr)
	Amount
• Redemption or earlier redemption, in part or full of NCDs issued by the company	644.00
• General Corporate Purposes	[ • ]
<b>Total</b>	[ • ]

## OFFER DETAILS

Fresh Issue	No. of Shares	WACA per Equity Share on a fully diluted basis (₹)
Fresh Issue (₹ 805 Cr)	Upto 20,854,922 <sup>~</sup> - 19,778,870 <sup>^</sup> Equity Shares	–
Offer for Sale	No. of Shares	
<b>The Promoter Selling Shareholder:</b>		
Chemika Speciality LLP	Upto 2,000,000 Equity Shares	9.68
<b>The Investor Selling Shareholders:</b>		
India Resurgence Fund, Scheme I	Upto 3,835,562 Equity Shares	11.80
India Resurgence Fund, Scheme II	Upto 6,478,876 Equity Shares	11.80
Piramal Natural Resources Pvt Ltd	Upto 3,835,562 Equity Shares	11.86

(<sup>~</sup> at lower price band and <sup>^</sup> upper price band)

## SHAREHOLDING PATTERN

Shareholders	Pre-offer		No. of Shares offered	Post-offer	
	Number of Equity Shares	% of Total Equity Share Capital		Number of Equity Shares	% of Total Equity Share Capital
<i>Promoters</i>	67,724,755	65.58%	2,000,000	65,724,755	53.41%
<b>Total for Promoter and Promoter Group</b>	<b>67,724,755</b>	<b>65.58%</b>	<b>2,000,000</b>	<b>65,724,755</b>	<b>53.41%</b>
<i>Public - Investor Selling Shareholder</i>	33,049,365	32.00%	14,150,000	18,899,365	15.36%
<i>Public – Others</i>	2,500,000	2.42%	0	38,428,870	31.23%
<b>Total for Public Shareholder</b>	<b>35,549,365</b>	<b>34.42%</b>	<b>14,150,000</b>	<b>57,328,235</b>	<b>46.59%</b>
<b>Total Equity Share Capital</b>	<b>103,274,120</b>	<b>100.00%</b>	<b>16,150,000</b>	<b>123,052,990</b>	<b>100.00%</b>

## BUSINESS OVERVIEW

Archean Chemical Industries Ltd (“**Archean**”) is a leading specialty marine chemical manufacturer in India and focused on producing and exporting **bromine, industrial salt, and sulphate of potash** to customers around the world. Archean is the largest exporter of bromine and industrial salt in India in Fiscal 2021 and has amongst the lowest cost of production globally in both bromine and industrial salt. They produce their products from their brine reserves in the Rann of Kutch, located on the coast of Gujarat, and manufacture products at their facility near Hajipir in Gujarat. As of June 30, 2022, they marketed their products to 18 Global customers in 13 countries and to 24 domestic customers.

They are one of the few companies having received certification under the Registration, Evaluation, Authorisation and Restriction of Chemicals (“**REACH**”), a European Union regulation enacted to address the production and use of chemical substances. Their REACH certification allows them to export their sulphate of potash products to their European customers.

## COMPANY PRODUCTS

### Bromine:

Bromine is the only non-metallic element that is a liquid at standard conditions. Bromine is widely distributed in nature but in relatively small amounts, mainly as soluble salts. It is found in the form of bromide in sea water and in natural deposits, together with chloride. It is a member of the halogen family and is found naturally in seawater, underground brine deposits and other water reservoirs.

Bromine concentration and the method of extraction varies depending upon the nature of its source. The lower the concentration of bromine in the brines, the more difficult and expensive it is to extract. Bromine is produced from the highly concentrated brine (bittern) that is left over after precipitation of potash and magnesium salts (kainite), which is used as a raw material for their production of sulphate of potash.

Elemental bromine is the starting point for manufacturing a wide range of bromine derivative performance products. The bromine and bromine-based business are used in a broad range of end-use industries and have applications in the pharmaceuticals, fumigants and agrochemicals, water treatment, mercury control, flame retardants, additives, and oil & gas segments of the chemicals industry. Globally the nations that are leading in the production of bromine is United States, along with China, India Israel, and Jordan as major producers of elemental bromine.

The bromine is used as key initial level materials, which have applications in the pharmaceuticals, agrochemicals, water treatment, flame retardant, additives, oil & gas, and energy storage batteries. Industrial salt is an important raw material used in chemical industry for production of sodium carbonate (soda ash), caustic soda, hydrochloric acid, chlorine, bleaching powders, chlorates, sodium sulphate (salt cake) and sodium metal. Sulphate of potash is used as a fertilizer and has medical uses. Bromine is recovered from soluble salts found in seawater, salt lakes, inland seas, and brine wells. Bromine is produced from brine after separation of most of the sodium chloride and potash.

Archean commands a leadership position in Indian bromine merchant sales (traded bromine in the market) by volume in Fiscal 2021, and they are the largest exporter of Bromine from India mainly to China. The balance of their bromine production is sold in the domestic market. Bromine is a highly corrosive, hazardous, and toxic chemical and its handling requires a high degree specialized expertise, which Archean has developed. The transportation of bromine is also dangerous and requires nickel and lead lined ISO containers, of which they had 228 such containers (owned and leased) for their export business as of June 30, 2022.

According to Frost & Sullivan, the bromine global market size was US\$3.13 billion in CY2021, and the market is expected to grow at a CAGR of 5.8% between CY2020 and CY2025. In addition, the growing demand for bromine and bromine performance derivatives driven by a host of factors including an increasing demand for flame retardants, increasing consumption of oil well chemicals and increasing use of hydrogen and zinc bromide in flow batteries. In response to this demand, Archean intends to, and is in the process of, increasing their manufacturing capacity for bromine production. In addition, plan to expand their product line into bromine derivative performance products in the next two-to-three years, in particular brominated flame retardants, clear brine fluids and bromine catalysts used for the synthesis of pure terephthalic acid ("PTA").

### Industrial Salt:

Industrial salt is the principal material in chlorine and caustic soda production (together, known as chloralkali) and is widely used in the chemical and food and beverage industries. Chlorine finds end-uses in vinyl, phosgene, chloromethanes, chlorinated C3, water treatment, synthesis HCl, bleach, and other organic and inorganic chemical material. Caustic soda finds end-uses in alumina, paper and pulp, soap and detergents, textiles, water treatment, bleach, and other organic and inorganic chemical material.

Industrial Salt has a high demand due to the diversity of applications in the oil & gas industry, chlor-alkali industry, and de-icing chemical industry. Archean is the largest exporter of industrial salt in India with exports of 2.7 million MT in Fiscal 2021.

Archean **exported 100% of their industrial salt production**, primarily to customers in Japan and China. According to Frost & Sullivan, global demand for industrial salt was 173 million MT in each of CY 2017, 171 million in CY 2018, and 173 million in CY 2019 and declined to 153 million MT in CY 2020 but is expected to grow at a CAGR of 2.8% between CY2020 and CY2025.

The growing demand for industrial salt will be driven primarily by increasing industrialization owing to its wide range of industrial applications. In particular, demand is expected to increase from the food and beverage industry, the chlor-alkali sector in the chemical industry as well as chemical processing, water treatment, agriculture, and de-icing.

### Sulphate of Potash:

Sulphate of Potash, also known as potassium sulphate, is a high-end, specialty fertilizer for chlorine-sensitive crops. It is one of the most popular forms of low chloride potash, largely due to its high 50-52% K<sub>2</sub>O content, which contains about 50% of plant food.

Sulphate of potash has major application in agriculture, providing both potassium and sulphur in soluble forms. This stimulates the growth of strong stems and provides disease resistance to crops and plants by promoting thickness of the outer cell walls. Further, sulphate of potash can reduce moisture loss from growing plants, thereby providing drought resistance, and has been proven to improve yield, nutritional value, colour, flavour, and storing quality of fruits and vegetables. It has proven to be particularly effective in the cultivation of citrus fruits, pomegranates, grapes, vegetables, tobacco, and nuts. In addition, due to its low saline index, sulphate of potash can also benefit soil containing a high-salt content. Hence, the primary end-use industries for their sulphate of potash includes the agrochemicals industry, which uses their product for the manufacture of fertilizer.

Sulphate of Potash is a high-end, specialty fertilizer for chlorine-sensitive crops and also has medical uses to reduce the plasma concentration of potassium when hypokalemia occurs. Archean is the only manufacturer of sulphate of potash from natural sea brine in India. According to Frost & Sullivan, global demand for sulphate of potash was 6.9 million MT in CY 2021 but is expected to grow at a CAGR of 6% between CY2020 and CY2025. The sulphate of potash market is being driven by the advantages of sulphate of potash over muriate of potash and growing demand from a growing middle-class population driving the use of fertilizers primarily for growing fruit and vegetables. They aim to be the key producer and supplier of sulphate of potash in India.

### Marine Chemical Salts:

Marine chemicals business is predominately conducted on a business-to-business basis both in India and internationally. The key geographies to which Archean export their products include China, Japan, South Korea, Qatar, Belgium, and the Netherlands. Some of their major customers include Sojitz Corporation, which is also a shareholder in the company, Shandong Tianyi Chemical Corporation, Unibrom Corporation, Wanhau Chemicals and Qatar Vinyl Co. Ltd.

Archean has an integrated production facility for their bromine, industrial salt, and sulphate of potash operations, located at Hajipir, Gujarat, which is located on the northern edge of the Rann of Kutch brine fields. Their manufacturing facility is located in close proximity to the captive Jakhau Jetty and Mundra Port, where they transport their products to their customers internationally. Their facility and its surrounding salt fields and brine reservoirs span approximately 240 sq.km. As of June 30, 2022, their manufacturing facility had an installed capacity of 28,500 MTPA of bromine, 3,000,000 MTPA of industrial salt and 130,000 MTPA of sulphate of potash. In the 3 months ended June 30, 2022, and in Fiscal 2022, their capacity utilization was 23.72% and 71.20%, respectively, of bromine, 38.54% and 119.54%, respectively of industrial salt and 0% and 1.91% of sulphate of potash. Archean has one of the largest salt works at one single location in the world. Their industrial salt washing facility has 3 washeries, each having a capacity of 200 tons/hour. Their facility is equipped with its own quality department, effluent treatment plant, sewage treatment plant and stockyard.

## REVENUE FROM OPERATIONS

Particulars	3 months ended June 30,				Fiscal					
	2022		2021		2022		2021		2020	
	Amount (₹ Cr)	% to Total	Amount (₹ Cr)	% to Total	Amount (₹ Cr)	% to Total	Amount (₹ Cr)	% to Total	Amount (₹ Cr)	% to Total
<b>Revenue from Operations</b>										
<b>Sales of products</b>	<b>400.19</b>	<b>99.98%</b>	<b>200.73</b>	<b>99.99%</b>	<b>1,129.58</b>	<b>99.92%</b>	<b>738.51</b>	<b>99.70%</b>	<b>605.81</b>	<b>99.61%</b>
- Domestic sales	133.03	33.24%	59.26	29.52%	334.70	29.61%	187.30	25.28%	128.97	21.21%
- Export sales	267.16	66.74%	141.47	70.47%	794.88	70.32%	551.21	74.41%	476.84	78.41%
<b>Revenue from sales of products</b>										
<b>Other operating revenues</b>	<b>0.08</b>	<b>0.02%</b>	<b>0.03</b>	<b>0.01%</b>	<b>0.85</b>	<b>0.08%</b>	<b>2.26</b>	<b>0.31%</b>	<b>2.36</b>	<b>0.39%</b>
- Export incentives	0.00	-	-	-	-	-	2.16	0.29%	1.54	0.25%
- Scrap sales	0.08	0.00%	0.03	0.01%	0.85	0.08%	0.10	0.01%	0.82	0.14%
<b>Total revenue from operations</b>	<b>400.27</b>	<b>100.00%</b>	<b>200.76</b>	<b>100.00%</b>	<b>1,130.44</b>	<b>100.00%</b>	<b>740.76</b>	<b>100.00%</b>	<b>608.17</b>	<b>100.00%</b>

## Revenue from Operations – Product-wise

Particulars	3 months ended June 30,				Fiscal					
	2022		2021		2022		2021		2020	
	Amount (₹ Cr)	% to Total	Amount (₹ Cr)	% to Total	Amount (₹ Cr)	% to Total	Amount (₹ Cr)	% to Total	Amount (₹ Cr)	% to Total
Marine Chemicals Salt	196.04	48.98%	86.87	43.27%	512.90	45.37%	363.72	49.10%	352.01	57.88%
Bromine	203.90	50.94%	113.86	56.71%	605.29	53.54%	344.41	46.49%	215.50	35.43%
Sulphate of Potash	0.25	0.06%	-	-	11.40	1.01%	32.54	4.39%	39.84	6.55%
Others	0.09	0.02%	0.03	0.02%	0.85	0.08%	0.10	0.01%	0.82	0.13%
<b>Total revenue from operations</b>	<b>400.27</b>	<b>100.00%</b>	<b>200.76</b>	<b>100.00%</b>	<b>1130.44</b>	<b>100.00%</b>	<b>740.76</b>	<b>100.00%</b>	<b>608.17</b>	<b>100.00%</b>

## MANUFACTURING FACILITIES

Archean has an integrated production facility for their bromine, industrial salt, and sulphate of potash operations, located at Hajipir, Gujarat, which are located in close proximity to the captive Jakhau Jetty and Mundra Port. Their facility and its surrounding salt fields and brine reservoirs span approximately 240 sq.km. As of June 30, 2022, their manufacturing facility had an installed capacity of 28,500 MTPA of bromine, 3,000,000 MTPA of industrial salt and 130,000 MTPA of sulphate of potash. Their facility is equipped with its own quality department, central quality assurance and quality control department, co-generation power plant, desalination plant, effluent treatment plant, sewage treatment plant and warehouse.

### Capacity Production and Utilization

Product Stream	As of and for the period ended June 30,			As of and for the period ended March 31,								
	2022			2022			2021			2020		
	Installed Capacity	Actual Production	Utilization (%)	Installed Capacity	Actual Production	Utilization (%)	Installed Capacity	Actual Production	Utilization (%)	Installed Capacity	Actual Production	Utilization (%)
Bromine	28,500	6,759	23.72%	28,500	20,293	71.20%	28,500	14,751	115.69%	10,500	8,855	84.33%
Industrial Salt	3,000,000	1,156,272	38.54%	3,000,000	3,586,269	119.54%	3,000,000	2,879,533	95.98%	3,000,000	2,905,054	96.84%
Sulphate of Potash	130,000	-	0.00%	130,000	2,483	1.91%	13,000	2,002	1.54%	130,000	19,042	14.65%

## COMPETITIVE STRENGTHS

- Leading market position, expansion and growth in bromine and industrial salt**

Archean attributes their strong market position to factors such as their long-standing relationship with global customers, their established infrastructure and access to brine reserves at the Rann of Kutch, their manufacturing facility, and their consistent delivery of high-quality products. Their leadership position and low cost-production offers them competitive advantages such as product pricing, economies of scale, and the ability to scale their business, increase customer loyalty and expand their client base, all of which have in turn resulted in the growth of revenues and EBIDTA in the last 3 fiscal years.

The market position in India and globally for each of their products:

Product	Company Market Position in India	Volume Produced in Fiscal 2022 (MT)	Volume CAGR (Fiscal 2019 to Fiscal 2022)	Revenue Fiscal 2022 (₹ Cr)	Percentage of revenue from Exports Fiscal 2022
Bromine	Largest export and leader in merchant sales	20,293	51.38%	605.28	44.88%
Industrial Salt	Largest exporter	3,586,269	11.11%	512.90	100.00%
Sulphate of Potash	Only Producer in India	2,483	(63.88)	11.40	90.75%

- High entry barriers in the specialty marine chemicals industry**

The specialty marine chemicals industry in which Archean operates has high entry barriers, which include the high cost and intricacy of product development, manufacture, and investment in salt beds, the limited availability of raw materials necessary for production, the limited number of locations with a suitable climate and access to reserves, and the lead time and expenditure required for research and development and building customer confidence and relationships, which can only be achieved through a long gestation period.



Given the nature of the application of their products and the processes involved, their products are subject to, and measured against, high quality standards and sensitive and rigorous product approval systems with stringent impurity specifications. Further, any change in the vendor of the products may require significant time and expense for customers, which acts as an entry barrier and disincentives any such change. Thus, customer acquisition is difficult and limits the number of competitors involved in the manufacturing of their products.

Further, bromine and certain raw materials that Archean use in production are highly corrosive, hazardous, and toxic chemicals. Therefore, handling these chemicals requires a high degree of technical skill and specialized expertise, and operations involving such hazardous chemicals must be undertaken only by personnel who are well trained to handle such chemicals. The level of technical skill and expertise that is essential for handling such chemicals can only be achieved over a period of time which creates entry barriers for new market entrants.

Company's existing brine fields were established over a period of 3 to 4 years before commercial cultivation was possible and, accordingly, the development time of brine reservoirs creates an entry barrier to potential domestic competitors. In addition, the Rann of Kutch brine fields are located in environmentally sensitive coastal areas which require a number of regulatory hurdles before production could be established.

- **Established infrastructure and integrated production with cost efficiencies**

Archean has an integrated production facility for their bromine, industrial salt, and sulphate of potash operations, located at Hajipir, Gujarat, which is located on the northern edge of the Rann of Kutch brine fields. They have one of the largest salt works at one single location in the world. Their industrial salt washing facility has 3 washeries, each having a capacity of 200 tons/hour. Their facility is equipped with their own quality department, effluent treatment plant, sewage treatment plant and stockyard. Their operations have an ISO 9001:2015 certification.

Their manufacturing facility is in the close proximity to the Jakhau Jetty and Mundra Port, where they transport their products to the customers internationally. The Jakhau Jetty is a fair-weather facility, operating for 7 to 8 months a year between the months of October/November through May. The Jakhau Jetty has a designed capacity of 5 million MTPA and a capacity to load 28,000 MT. It is equipped with a twin conveyor system; diesel generator sets and is supported by a stockyard with storage capacity more than 350,000 MT to ensure continuous availability of products for customers.

Archean has made significant investments in capital expenditures for the improvement and maintenance of their facility, including investments in salt beds, which typically have a 3 to 4 years gestation period, and investments in ISO containers for the export of bromine of which they had 228 (owned and leased) as of June 30, 2022. The transportation of bromine is also dangerous and requires lead lined ISO containers. Their ISO containers enable more efficient freight shipping than conventional shipping, provide an advantage of scale at ports, are safer and more reliable in transport, and provide a cost-advantage and greater flexibility for exporting their products.

They have increased the mechanization of their production process which will bring further increased efficiencies and product consistency. The cost of production for Industrial salt from sea water brine is about US\$12 to 15 per MT, while their costs are in the range of US\$5.5- 6 per MT. Further their quality of salt is on par with Grade 1 salt required by chlor-alkali producers. Their best-in-class cost position along with the quality of their product has enabled them to be a competitive salt exporter to South-East Asian markets and West Asia.

- **Focus on environment and safety**

Environment and safety considerations are an important part of company's operations. They undertake an annual environment and safety audit. As of June 30, 2022, they had an environmental, health and safety team of 13 employees.

They have implemented an environmental management plan, which is focused on the following:

- ensuring that the manufacturing facility is compliant with environmental guidelines and standards set forth by regulatory agencies,
- ensuring that adequate pollution control systems are installed and operating satisfactorily,
- ensuring that the pollution concentration of treated effluent, ambient air, and stack air are within the prescribed standards set forth by regulatory agencies,
- ensuring proper waste management handling and disposal system procedures are in place and followed by all of their employees.

Salient features of their environmental management plan include:

- *Environment Management Cell Program,*
  - *Stack Air and Ambient Air Monitoring,*
  - *Water Quality Monitoring,*
  - *Noise Level Monitoring,*
  - *BQVI Tanks.*
- ***Largest Indian exporter of bromine and industrial salt with global customer base***

As of June 30, 2022, Archean had 18 global customers and 24 domestic customers. In the 3 months ended June 30, 2022 and in Fiscal 2022, Fiscal 2021 and Fiscal 2020, their largest customer, Sojitz Corporation, contributed 19.29%, 20.56%, 30.51% and 31.94%, respectively, of their revenue from operations;

- The Top-10 customers contributed 60.69%, 61.99%, 75.70% and 77.14%, respectively, of the revenue from operations.
- The top 20 customers contributed 81.75%, 80.94%, 88.66% and 92.05%, respectively, of the revenue from operations.

In the 3 months ended June 30, 2022 and in Fiscal 2022, Fiscal 2021 and Fiscal 2020, their industrial salt sales to Sojitz Corporation accounted for 39.38%, 45.29%, 61.95% and 54.98%, respectively, of their total salt sales, while no customer accounted for more than 20% of their total bromine sales.

The company has an export-oriented business, and their revenue from operations were attributed to export sales. Some of the key geographies to which they export their products include China, Japan, South Korea, Qatar, Belgium, and the Netherlands.

They enjoy relationships in excess of 5 years with 7 out of their Top-10 customers. Their long-term relationships and ongoing active engagements with customers also allow them to plan their capital expenditure, enhance their ability to benefit from increasing economies of scale with stronger purchasing power for raw materials and a lower cost base.

The exports and domestic sales as a percentage of the revenue from operations:

Particulars	3 months ended June 30,		Fiscal					
	2022		2022		2021		2020	
	Export	Domestic	Export	Domestic	Export	Domestic	Export	Domestic
Bromine	34.88%	65.12%	44.88%	55.12%	46.10%	53.90%	39.79%	60.21%
Industrial Salt	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%
Sulphate of Potash	0.13%	99.87%	90.75%	9.25%	88.32%	11.68%	98.09%	1.91%

Company's sales across geographies are augmented by their sales and marketing team, including their relationship with **Sojitz Corporation**, which are instrumental in effective supply-chain management as well as monitoring exposures to risks that may arise from customer or geographical concentration.

- ***Strong and consistent financial performance***

Archean has built their business organically and have demonstrated consistent growth in terms of revenues and profitability. In Fiscal 2021, they were among the fastest growing specialty marine chemical companies in India and the largest exporter of bromine and industrial salt by volume in India. Their revenue from operations have increased at a CAGR of 36.34 % and the revenue from exports have grown at a CAGR of 29.11% during Fiscal 2020 to Fiscal 2022.

- ***Experienced management team, promoters and financial investors and stakeholders***

Archean is led by a qualified and experienced management team that has the expertise and vision to manage and grow their business. Their management team's collective experience and capabilities enables them to understand and anticipate market trends, manage their business operations and growth, leverage customer relationships, and respond to changes in customer preferences. The management team continues to focus on production, marketing, and new growth areas in their respective product segments. The knowledge and experience of their promoters, along with senior management, team of skilled personnel, and financial investors and stakeholders, provides them with a significant competitive advantage as they seek to expand their production capacities and product portfolio into downstream specialty marine chemicals, as well as in their existing markets and new markets.



In 2011, they established their relationship with Sojitz Corporation, a Japanese trading conglomerate and a major customer, which allowed them to develop new solar evaporation ponds in India based on the growing demand in Asia and offtake by Sojitz. In 2018, India Resurgence Fund, a joint venture between Piramal Enterprises Ltd and Bain Capital Credit (“IndiaRF”) invested US \$156 million in the company in year 2018, which allowed the company to refinance their debt, offer capital investment to optimize output across product lines, and provided working capital.

## KEY BUSINESS STRATEGIES

- **Expand into downstream bromine derivative performance products**

Archean plans to expand their product line into bromine derivative performance products in the next 2 to 3 years, in particular brominated flame retardants, clear brine fluids and bromine catalysts used for the synthesis of PTA.

They are setting up a new facility to manufacture bromine performance derivatives products through their subsidiary, Acume Chemicals Pvt Ltd. The proposed facility will be constructed on 34,983 square meters parcel of land which has been allotted to them from the GIDC, Ankleshwar. The installed capacity of the facility is proposed to be an aggregate of:

- High end Flame retardant - 10,000 TPA, which is expected to commence commercial operations by second quarter of Fiscal 2024.
- Clear Brine fluids – 13,000 TPA, which is expected to commence commercial operations by second quarter of Fiscal 2024.
- PTA – 5,000 TPA, which is expected to commence commercial operations by second quarter of Fiscal 2024.

In respect of the production of flame retardant, they have entered into an agreement to design, engineer, construct, commission and operate the plant to produce with a Chinese technology provider. The technology tie up also includes buyback of minimum of 90% of the produced quantity by the Chinese technology provider at mutually agreed pricing terms.

The total estimated cost for setting up the bromine performance derivatives products is approximately ₹251.70 crore, which they intend to fund through their internal accruals.

- **Expand the bromine and industrial salt capacities**

Archean intends to, and is in the process of, increasing the manufacturing capacity for bromine production. To achieve the expansion of their bromine capacity, they added in Fiscal 2021 a feed enrichment section at their site in Hajipir, Gujarat which will improve bromine recovery from their sea bittern. This expansion added 18,000 MTPA to their bromine capacity. They are looking to add an additional 12,500 MTPA capacity by Fiscal 2023 at an estimated cost of approximately ₹ 17.88 crore which they intend to fund through their internal accruals.

In addition, to cater to the growing demand from their existing customers and to meet requirements of new customers, they intend to expand their manufacturing capacities for industrial salt production by adding an additional washery of 250 tons per hour. They expect that this additional washery will be operational in Fiscal 2023.

- **Continue to build the global customer base and enter new geographical markets**

Archean exports their products to 18 global customers in 13 countries. They enjoy relationships in excess of 5 years with 7 out of their Top-10 customers. They intend to focus on increasing their wallet share with existing customers. They have built long-standing relationships with their customers through various strategic endeavours, which they intend to leverage by entering into long-term marketing arrangements. In addition, they intend to continue to leverage their existing sales and marketing network, diversified product portfolio and their industry standing to establish relationships with new multinational, regional and local customers.

They are expanding globally to serve their existing direct end-use customers as well as to secure new direct end-use customers and expand the reach of their products in new markets. Company’s focus will also be to strengthen their sales team in India, Asia and Europe to ensure that they are able to deliver products to their customers in a timely manner.

- **Continue to focus on quality, environment, health, and safety**

Across their manufacturing facility, they have put in place quality systems that cover all areas of their business processes from manufacturing and supply chain to product delivery to ensure consistent quality, efficacy, and safety of their products. Their products adhere to global quality standards; goes through various quality checks at various

stages, including random sampling check and quality check by internal and external agencies. Many of their key customers have audited and approved their facility and manufacturing processes in the past and may undertake similar audits periodically in the future. They also undertake an annual environmental, social and governance (“ESG”) audit. They strive to ensure that they do not discharge any harmful elements from their manufacturing operations. They are equipping their fleet of 35 vehicles for the transportation of their salt products in India with LNG tanks to reduce their consumption of diesel fuel.

## INDUSTRY OVERVIEW

### Key players in the Indian bromine industry

Producers of elemental bromine in India are as follows:

Key Manufacturers	Location	Approved Annual Capacity	Actual Production in Fiscal 2021
Archean Chemical Industries Ltd.	Plant is located at Hajjipir, Kutch District	42.5 KT	14 KT
Satyesh Brine Chem	Plant is located at Hajjipir, Kutch District	25 KT	3 KT
Solaris ChemTech Industries Ltd.	Plant is located at Khavda, Gujarat	23 KT	18 KT
Agrocel Industries Pvt. Ltd.	Plant is located in Greater Rann of Kutch	10 KT	7 KT
Nirma Ltd.	Plant is located in Kalatalav village, near Bhavnagar in Gujarat	3 KT	2 KT
Tata Chemicals Ltd.	Plant is located at Mithapur, Gujarat	2.4 KT	1 KT
Dev Salt Private Ltd	Plant is located at Morbi district of Gujarat	2.5 KT	1 KT

### Bromine production and captive Volumes for FY21, in KT

Company	Production Numbers (KT)	Captive Consumption (KT)	Net merchant sales (KT)
Archean Chemical Industries Ltd.	14.00	-	14.0
Satyesh Brine Chem	3.00	-	3.00
Solaris Chemtech	18.00	10.50	8.50
Agrocel	7.00		
Nirma	2.00	2.00	-
Tata Chemicals	1.00	1.00	-
Dev Salt Private Ltd.	1.00	-	1.00
<b>Total Production</b>	<b>46.00</b>	<b>13.50</b>	<b>32.50</b>

## COMPETITION

The speciality marine chemicals industry presents significant entry barriers, including customer validation and approvals, expectation from customers for process innovation and cost reduction, high quality standards and stringent specifications. Company’s competition varies by market, geographic area, and type of product. As a result, to remain competitive in their markets, they must continuously strive to reduce their costs of production, transportation and distribution and improve their operating efficiencies. They face competition primarily from international manufacturers, especially producers in Israel (Dead Sea area), and North America. They compete primarily on the basis of product quality, technology, cost, delivery, and service, as well as quality and depth of senior level relationships.

### COMPARISON WITH LISTED INDUSTRY PEERS (AS ON 31<sup>ST</sup> MARCH 2022)

Name of the Company	Consolidated/ Standalone	Face Value	Total Income Fiscal 2022 (₹ Cr)	EPS		NAV (₹)	P/E	RoNW (%)
				Basic	Diluted			
Archean Chemical Industries Ltd	Restated	2	1,142.83	18.26	18.26	25.28	[●]	72.24%
<b>Peer Group</b>								
Tata Chemicals Ltd	Consolidated	10	1,287.81	49.17	49.17	716.48	24.16	6.89%
Deepak Nitrite Ltd	Consolidated	2	6,844.80	78.20	78.20	244.77	28.88	31.95%
Aarti Industries Ltd	Consolidated	5	7,000.76	36.06	36.06	163.16	19.18	22.10%
Neogen Chemicals Ltd	Consolidated	10	488.32	18.70	18.70	176.12	79.79	10.16%

Source: RHP, P/E Ratio has been computed based on the closing market price of equity shares on NSE on October 27, 2022.

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