



**Chemplast Sanmar Ltd.**

**ArihantCapital**  
Generating Wealth



**Abhishek Jain**  
[abhishek.jain@arihantcapital.com](mailto:abhishek.jain@arihantcapital.com)  
022 4225 4871

**Anmol Das**  
[anmol.das@arihantcapital.com](mailto:anmol.das@arihantcapital.com)  
022-67114834

**CMP: INR 423**  
**Target Price: INR 718**  
**Rating: BUY**

**Stock Info**

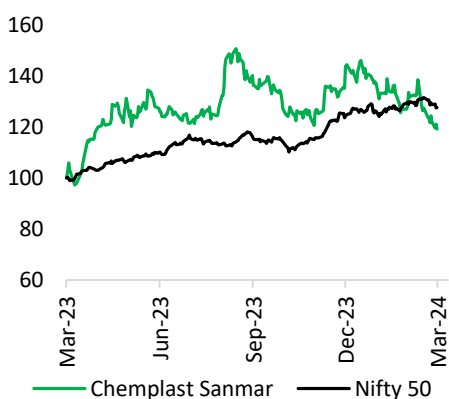
BSE	543336
NSE	CHEMPLAST
Bloomberg	CHEMPLAST:IN
Reuters	CHEMPLAST.BO
Sector	Chemicals
Face Value (INR)	5
Equity Capital (INR Mn)	791
Mkt Cap (INR Mn)	68,100
52w H/L (INR)	543 / 342
Avg. Yearly Volume (in 000')	265

**Shareholding Pattern %**

(As on Dec, 2023)

Promoters	54.99
DII's	25.41
FII's	11.16
Public	6.34

**Chemplast Sanmar Vs Nifty**



**Abhishek Jain**

[abhishek.jain@arihantcapital.com](mailto:abhishek.jain@arihantcapital.com)

022-4225 4871

**Anmol Das**

[anmol.das@arihantcapital.com](mailto:anmol.das@arihantcapital.com)

022-6711 4834

Chemplast Sanmar Ltd. is part of the SHL Chemicals Group, which in turn is a constituent of the Sanmar Group. It is a major manufacturer of Suspension PVC (61% of FY23) used for pipe manufacturing and construction, Specialty Paste PVC resin and Custom Manufactured Chemicals (22% of FY23) for agro-chemical, pharmaceutical and fine chemicals sector. The other Non-Specialty chemicals include Caustic Soda, Chloromethane, Hydrogen Peroxide and Refrigerant gas make up for the rest. The company has undertaken several expansion capex for INR 10 bn which are all about to be completed during the H2FY24 in the high margin Specialty paste PVC Resin and Custom Manufacturing segment.

**Capacity expansion of high margin Specialty Chemicals to drive growth**

Chemplast Sanmar's expansion of the Specialty Paste PVC Resin and Custom Manufacturing divisions under the Specialty Chemicals segment will be driving the company's future earnings growth. This expansion will increase the mix of the Specialty Chemicals division from 21.8% in FY23 to 42.0% by FY26E, with the Custom Manufacturing division increasing massively between this period, from INR 3.25 bn in FY23 to around INR 9.6 bn by FY26E. More than 60% of Specialty Paste PVC Resin, capacity (post expansion) is backward integrated.

The Company is also undertaking expansion of 41 ktpa in the Specialty Paste PVC Resin division, which is coming up at Cuddalore. Leveraging its leadership position in the Indian market, post expansion, CSL will have about 83% of domestic production capacity and about 66% market share with the downstream capacities configured to CSL's resin quality.

**Change in revenue mix to drive margins upwards for CSL**

The Company is doing expansion for the Specialty and the Custom Manufacturing business, which had high margins traditionally. So, going ahead, we believe as the demand comes back for the Specialty segment, the margins will breach 15-20% levels in FY25 and FY26. Custom Manufacturing for Pharma intermediates and formulations being a niche business service provided to clients on a per contract basis, will have even higher margins than the core Specialty chemical products, and we believe the margins for these to be anything above ~25%. This will allow CSL's blended margins to improve as the revenue mix tilts more for the Specialty & Customs Manufacturing business from current levels of 22% in FY23 to 42% by FY26 end while Suspension PVC mix will reduce from 61% in FY23 to 48% in FY26 end.

**Bottomed Out Crude Oil & Natural Gas Prices**

Crude Oil & Natural Gas prices have very much fallen to their traditional lower levels, and aren't expected to fall further. As raw material prices for the feedstock for Specialty Paste PVC Resin and Suspension PVC, these commodities price levels are somewhat correlated for the PVC and their derived products prices. As the Brent Crude prices fluctuate between USD 80-90 levels per barrel, it will allow CSL and other players in the PVC derived products to quote a notch higher prices for Suspension PVC products which forms half the composition of their revenue mix.

**Valuation & Outlook**

Chemplast Sanmar Ltd. is undergoing capacity expansion in the high margin Specialty Chemicals segment. The capex towards Custom Manufacturing will drive their revenue from INR 3.25 bn in FY23 to INR 9.6 bn in FY26E. The Specialty Paste PVC Resin will grow by 135% over the period of FY23-FY26 as per our estimates as a factor of both Capex as well as demand being very robust. The lower cost of Energy and Crude Oil will aid the company's raw material prices for their feedstock. We initiate coverage with a "BUY" rating at a Target Price of INR 718 per share based on SOTP; with an upside of 69.7%.

## Overview

<b>Business Model</b>	Chemplast Sanmar is one of the leading producers of specialty chemicals in South India. They are the largest producer of Suspension PVC in South India with a capacity of 331 KTPA. In the specialty chemicals segment, they have a capacity of 66 KTPA for Specialty Paste PVC and custom manufacturing capacity of 1,068 tonnes per annum for agri & pharma innovators. In the non-specialty chemicals business they capacity of 119 KTPA for Caustic Soda, 34 KTPA for Hydrogen peroxide and 35 KTPA for Chloromethane.
<b>Strategic Positioning</b>	Largest producer of Suspension PVC, largest Paste PVC player in India and Hydrogen Peroxide in South India, and 4 <sup>th</sup> in Caustic Soda in South India.
<b>Competitive Edge</b>	The Company leads the markets in the chemicals it produces in the Southern Indian states.
<b>Financial Structure</b>	Chemplast Sanmar's revenue mix includes 61% of sales from Suspension PVC, 22% from Specialty Paste PVC Resin and 17% from Non-Specialty Chemicals, e.g. Caustic Soda, Hydrogen Peroxide, etc. The company has negative Net Debt, i.e. excess Cash as of March 2023.
<b>Future Revenue drivers</b>	CSL's ongoing capex of Rs 10 bn towards Specialty Paste PVC to expand capacity by another 41 KTPA will commercialize by H2FY24, along with 2 <sup>nd</sup> phase of Custom Manufacturing Chemicals division, while the 1 <sup>st</sup> phase is complete. The Specialty Paste PVC Resin expansion will increase their market share in India to Two-thirds the total market in India.
<b>Share Holder Value Proposition</b>	Prices of Suspension PVC and Specialty Paste PVC resin have bottomed out in Q1FY24, picking up since Q2 beginning due to strong demand across the country, EPS will rise to Rs 55 per share by FY26E from single digits in FY23.
<b>Earnings Visibility</b>	The CAGR growth rate of Revenue, EBITDA and PAT between FY23 & FY26E is expected to be 13.6%/41.6%/79.7% respectively.
<b>Risk</b>	Major risks include raw material price fluctuations including coal and superior kerosene prices, demand and prices of Suspension PVC and Specialty Paste PVC resin.
<b>Rating Rationale and Fair Value Calculation</b>	Chemplast Sanmar Ltd. is undergoing capacity expansion in the high margin Specialty Chemicals segment. The capex towards Custom Manufacturing will drive their revenue from INR 3.25 bn in FY23 to INR 9.6 bn in FY26E. The Specialty Paste PVC Resin will grow by 135% over the period of FY23-FY26 as per our estimates as a factor of both Capex as well as demand bouncing back to normalized levels. The lower cost of Energy and Crude Oil will aid the company's raw material prices for their feedstock. We initiate coverage with a "BUY" rating at a Target Price of INR 718 per share based on SOTP; with an upside of 69.7%.

## Exhibit 1: Summary

Summary	FY21	FY22	FY23	FY24E	FY25E	FY26E
Net Sales	37,987	58,920	49,411	43,774	56,259	65,100
EBIDTA	9,615	11,968	4,681	2,754	10,327	13,958
Net Profit	4,101	6,488	1,524	682	6,360	9,315
Diluted EPS	30.59	41.03	9.64	4.31	40.22	58.91
P/E (x)	16.35	12.19	51.89	115.94	12.43	8.49
EV/EBIDTA (x)	8.76	6.44	16.50	31.05	7.36	4.55
P/BV (x)	-19.18	4.64	4.25	4.10	3.09	2.26
ROE (%)	-117.34	38.05	8.20	3.54	24.82	26.66
Debt/Equity (x)	-5.79	0.51	0.54	0.48	0.37	0.27

### Investment Rationale

#### Capacity expansion to drive volume growth

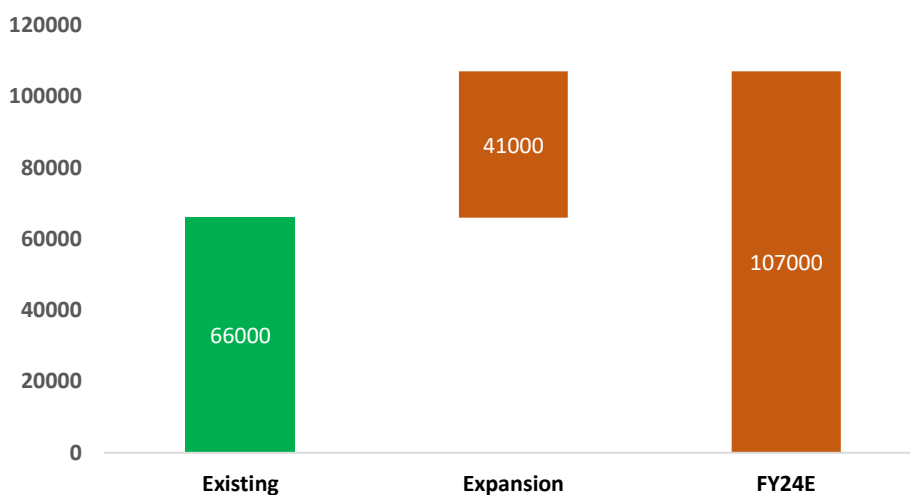
Chemplast Sanmar Ltd. is the largest manufacturer of Specialty Paste PVC resin in India. It is manufactured at Mettur facility since 1968. The primary raw materials include VCM (Vinyl Chloride Monomer), EDC (Ethylene Di Chloride), Ethylene and Chlorine. It manufactures significant portion of EDC and all of VCM requirements in-house. This provides flexibility in operations and reduces dependence on external suppliers. There is customer stickiness with high repeat business.

There are certain tailwinds, which augurs well for the Specialty Paste PVC resin division of Chemplast Sanmar Ltd.

- There are environmental concerns around global capacities since 40% of global capacity is mercury based (with more than 80% of China capacity being carbide driven).
- There is growing demand in the end-user industry driven by low per capita consumption.
- It has a high probability for import substitution. About 53% of Indian demand is served through imports.
- There is lack of substitute for this product.

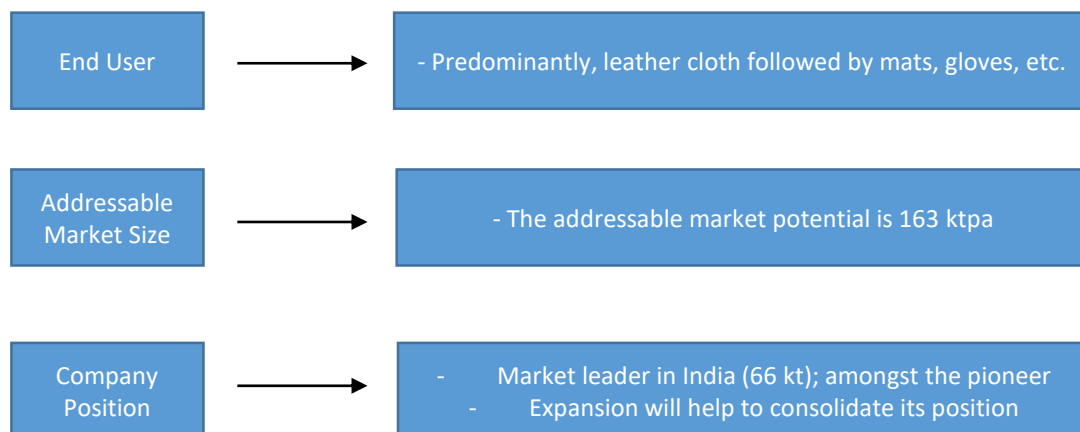
Chemplast Sanmar Ltd. is the oldest player and one of the only two companies in India having the requisite technology. More than 60% of Specialty Paste PVC capacity (post expansion) is backward integrated. It is undertaking expansion of 41 ktpa, which is coming up at Cuddalore. Leveraging its leadership position in the Indian market, post expansion, CSL will have about 83% of domestic production capacity and about 66% market share with the downstream capacities configured to CSL’s resin quality. It also has a strong clientele with longstanding customer relationships.

**Capacity Expansion: Specialty Paste PVC Resin (KTPA)**



(Source: Company filings, Arihant Research)

Below is the summary of the advantage that Chemplast Sanmar has in the Specialty Paste PVC business, which it can further leverage through capacity expansion:



### Traction in Custom Manufacturing Business

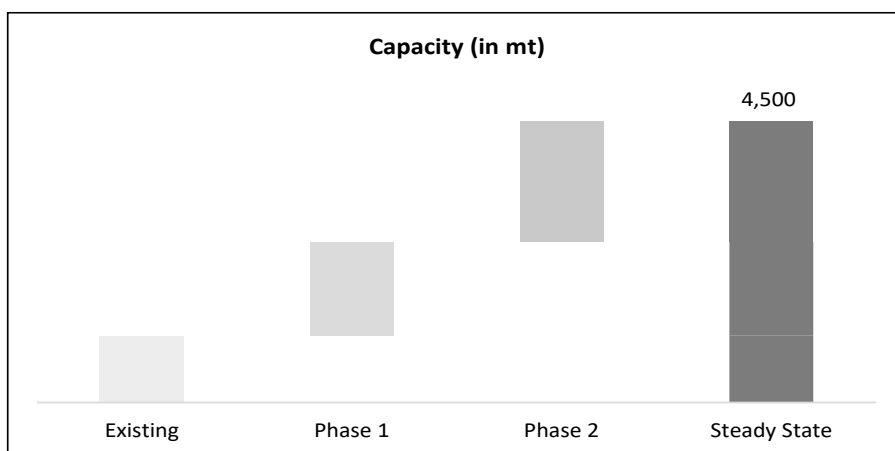
The Custom Manufacturing Business is a part of specialty chemical division of Chemplast Sanmar Ltd. The manufacturing facility is located at Berigai and adheres to international quality standards. The division has been growing rapidly on the back of 15 years of longstanding client relationships.

It manufactures starting materials, advanced intermediates and active ingredients for global innovator companies – ‘One Product to One Customer’ strategy. It has wide range of chemistry capabilities including cyanation, hydrogenation and liquid purification. Process engineering, in-house process research and large-scale manufacturing capabilities make it a one-stop shop manufacturing of newly discovered molecules.

The following macro tailwinds in the Custom Manufacturing Business will facilitate growth for Chemplast Sanmar Ltd.:

- India’s share in the global outsourced Agro CMC (Custom Manufacturing Chemical) market is increasing at a faster pace of 10% - 12%
- Regulatory constraints from the European Union (EU) are increasing
- There is greater availability of skilled labour in India in the Custom Manufacturing Business
- India will benefit from China +1 strategy as companies will move away from China for custom manufacturing
- There is a higher and increasing penetration of Active Pharmaceutical Ingredients (API) in India

### Ramp – up in manufacturing capacity of the Custom Manufacturing Business



(Source: Company filings, Arihant Research)

### Existing opportunities:

By mid May 2023, the company has signed 2 Letter of Intent (LoI) for 2 molecules with revenue visibility of INR 8 bn over the next 4 years. The first 2 molecules will be produced from the 1<sup>st</sup> phase of the increased capacity of the Custom manufacturing which commenced in Sept 2023, and the commercial production will start from the Q3/Q4FY24. The first and the second LoI is for Advanced Intermediate, which will be used for manufacturing Active Ingredient. Afterwards, in July, the Company got selected and finally signed the Letter of Intent (LoI) in Sept 2023 to manufacture an advanced Active Ingredient (AI). The LoI covers a period of 5 years. This is the third LoI the Company has signed over the last 12 months.

Based on the One Product for One Customer policy, the Custom Manufacturing will open a whole new frontier of advanced learning and intellectual capabilities, along side reuping the company’s capabilities in the custom manufacturing space.

The first phase of the expansion of the Custom Manufacturing has already commenced in Sept 2023, where the first 2 LoIs will be manufactured, and the 2<sup>nd</sup> phase of the Custom Manufacturing is being carried out with a total cost of INR 6.8 bn to be commenced by the end of Q4FY24 where the 3<sup>rd</sup> LoI will be manufactured, with the commercial production beginning in FY25 taking the total capacity of Custom Manufacturing segment to 4,500 MTPA.

### Addressable business opportunity:

The Custom Manufacturing Business is expected to triple its current revenues in the next three to four years to INR 10 billion, based on strong pipeline and robust client relationship. In FY24, the division is likely to grow between 10% to 15% in revenue terms, and will exhibit higher growth rates post FY24 as new blocks commence.

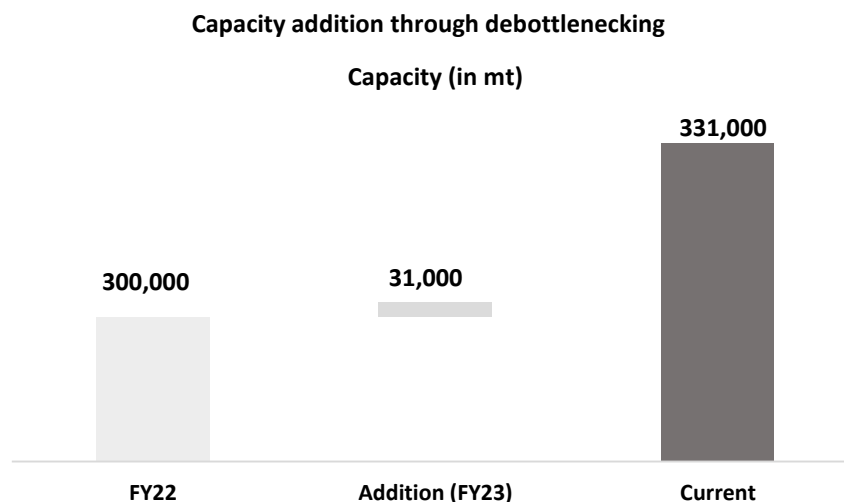
Once the custom Manufacturing division starts ramping up, the company will start getting more LoIs from other agro-chemical innovators as well as Pharma innovators, taking the topline from the segment multi-fold (3-4x) times in the next 3-4 years.

**Leveraging leadership position in Suspension PVC**

The suspension PVC business is a 100% subsidiary of the company. It is the largest manufacturer of Suspension PVC in South India and the second largest manufacturer in India.

The main growth factors, which positively impact the company are:

- Although there are new capacity addition announcements, but there is significant gap between demand and supply and India will continue to be a huge deficit market.
- There is huge opportunity related to import substitution. About 60% of the Indian demand is fulfilled through imports.
- Owing to increase in per capita consumption, there is expanding demand in the end-user industry.



(Source: Company filings, Arihant Research)

It has received environmental clearance to go up to 6,00,000 tonnes from the current capacity. In the interim, it had undertaken debottlenecking exercise at a marginal capital expenditure of around INR 230 Mn. The initiative has increased the overall capacity to 3,30,000 tons and will have a payback period of six months. If required, it can further expand its capacity to 6,00,000 tonnes.

**An integrated chemical company**

It manufactures caustic soda, hydrogen peroxide, chloromethanes and refrigerant gases as part of other chemical division of the company. As a result, it is a completely integrated chemical company.

**Caustic Soda:** It is generated as a joint product in the process of manufacture of chlorine. The total capacity of the product facility is 119,000 mtpa. It is sold at 45% - 50% concentration to customers.

**Hydrogen peroxide:** It is part of downstream integration as a value-added product. The plant is designed for a capacity of 34,000 tons per year of 50% concentration. The production process adopted is environment-friendly.

**Chloromethanes:** It refers to a group of products namely, Methyl Chloride, Methylene Di Chloride, Chloroform and Carbon Tetra Chloride. The plant capacity is 35,000 mtpa. It is part of downstream integration as a value-added product.

**Refrigerant Gas:** It is primarily used as a cooling agent in air-conditioning systems. Chemplast Sanmar Ltd. utilizes chloromethanes captively to manufacture R-22.

Thus, it has a diversified product portfolio and customer base. It has fully integrated operations resulting in sufficient control over feedstock. The entire chlorine is consumed in-house and there is no disposal issue.

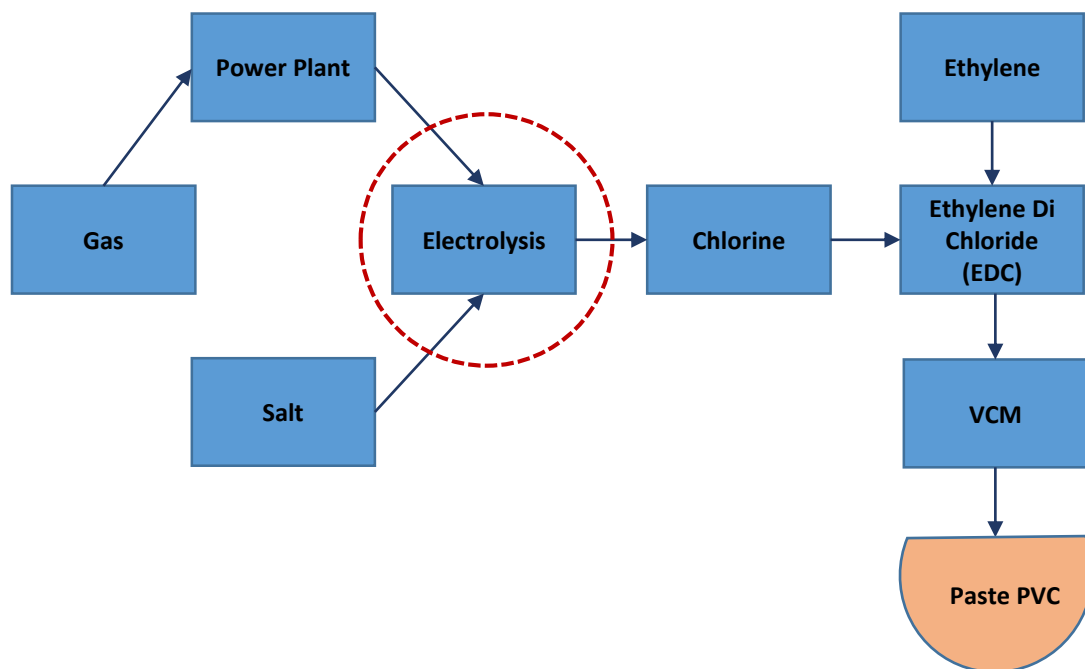


The below process flow highlights the vertically integrated operations of Chemplast Sanmar Ltd.

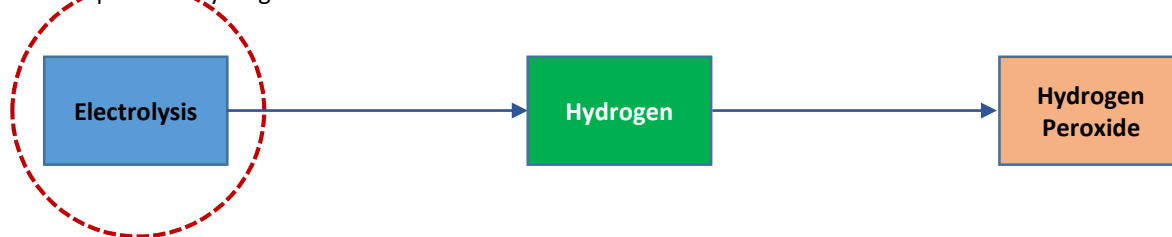
The manufacturing facilities are located at Mettur, Berigai and Vedaranyam in Tamil Nadu and Karaikal in the Union Territory of Puducherry.

It has its own marine terminal facilities at Karaikal and Cuddalore that allows for efficient transport of key raw materials like ethylene and Vinyl Chloride Monomer (VCM).

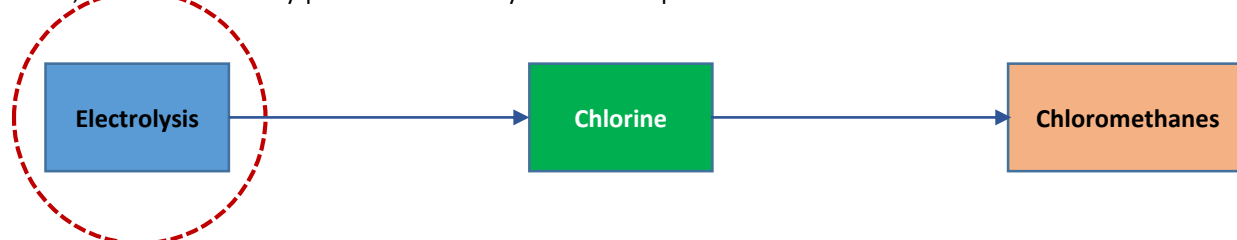
Ethylene is converted into Ethylene Di Chloride (EDC) by reacting with Chlorine (in the direct chlorination process) or with hydrochloric acid (in the oxy chlorination process). This is then converted into VCM (Vinyl Chloride Monomer), which is further converted into Poly Vinyl Chloride (PVC).



The electrolysis process is used to manufacture caustic soda. Hydrogen, which is a by-product of electrolysis is utilized to produce Hydrogen Peroxide.

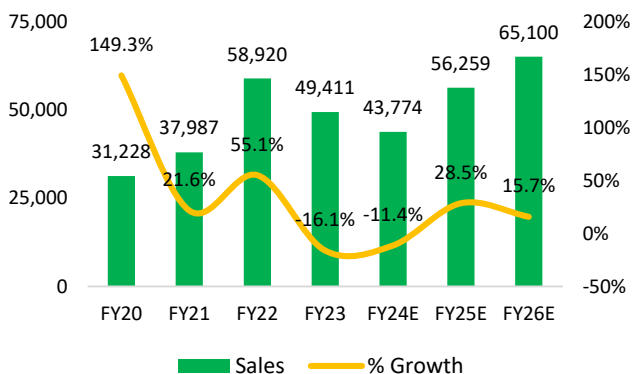


Chlorine, which is another by-product of electrolysis is used to produce Chloromethanes.

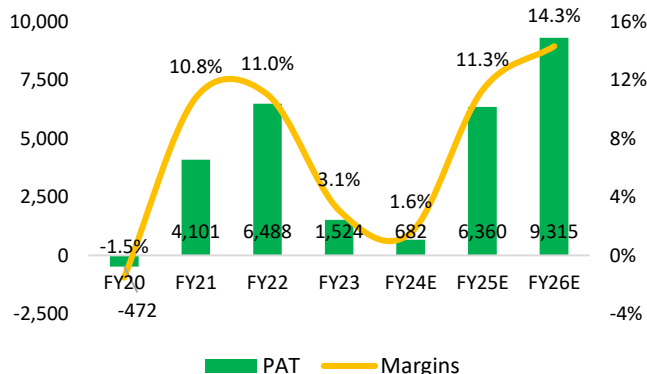


Thus, there is flow and integration among different chemical manufacturing processes.

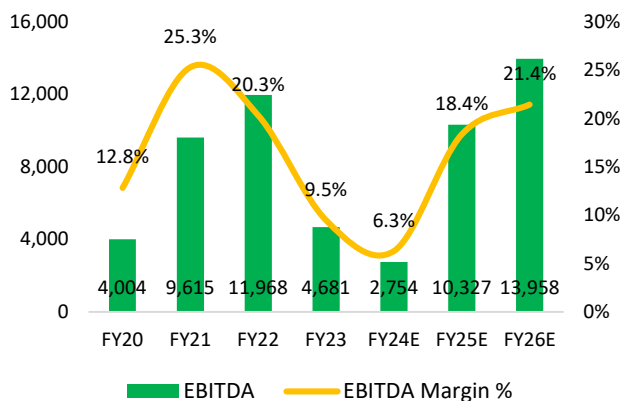
Sales & Sales Growth



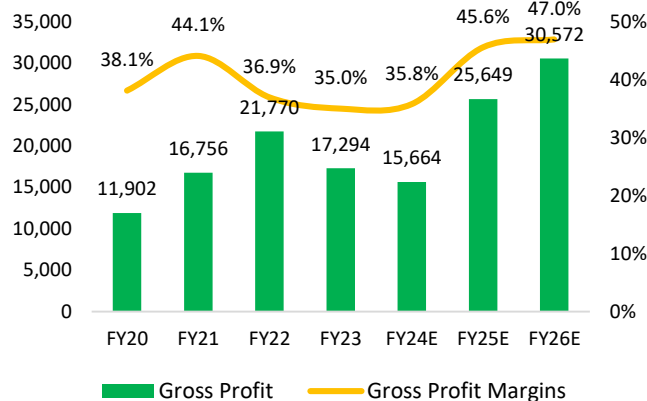
PAT & PAT Margins



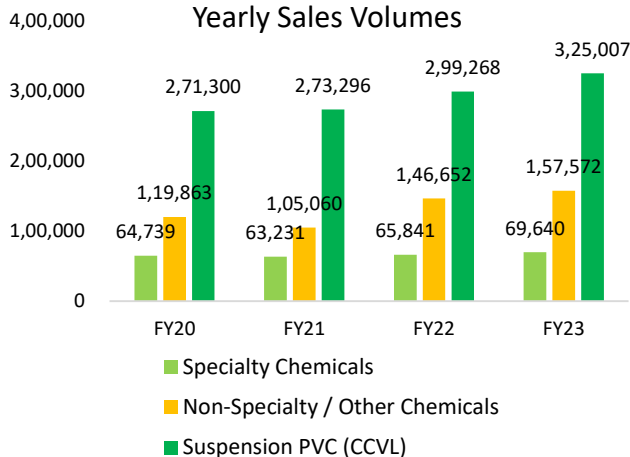
EBITDA & EBITDA Margins



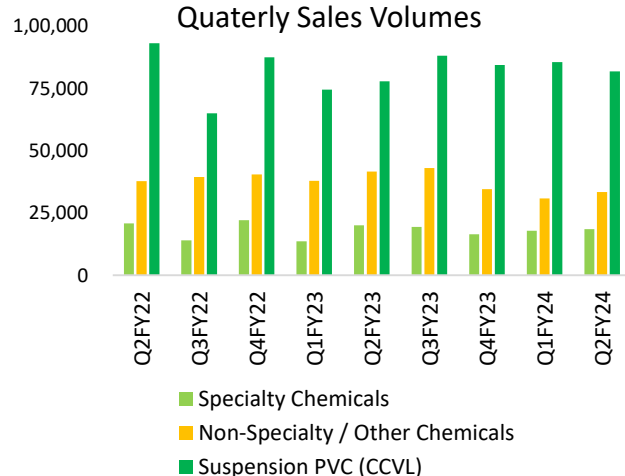
Gross Profit & Margins



Yearly Sales Volumes



Quarterly Sales Volumes



Source: Company, Arianth Research

Outlook & View:

Chemplast Sanmar Ltd. is implementing a multi-pronged strategy to drive growth, which includes capacity expansion, ramping up its Custom Manufacturing Business and integrating its business operations. Post the completion of its capital expenditure cycle, it will benefit from volume growth. It is leveraging its clientele to expand its custom manufacturing business and we expect the specialty business to be the major driver of revenue growth, going forward. Additionally, the company benefits from demand supply mismatch in the domestic PVC market. Factoring in the above growth drivers, we have a positive view on the company. We initiate coverage with a "BUY" rating at a Target Price of INR 718 per share based on SOTP; with an upside of 69.7%.



**Industry Overview:****Domestic PVC Industry:**

India Polyvinyl Chloride market demand stood at 3 Million Tonnes in FY2021 as demand dropped due to Covid and is forecast to reach 7.03 Million Tonnes by FY2030, growing at a healthy CAGR of 6.11% until FY2030. The demand for Polyvinyl Chloride in the manufacturing of electric vehicles and surge in application in the healthcare industry is the major driver for the forecast period.

**Specialty paste PVC resin:****PVC and its types**

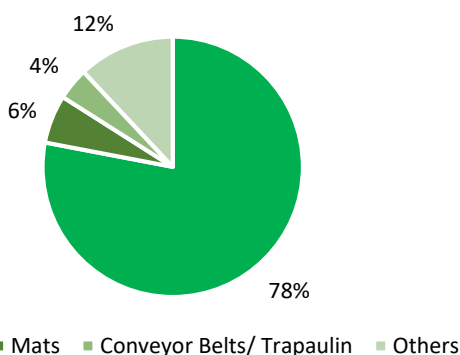
Poly Vinyl Chloride ("PVC") resins are derived from its monomer, Vinyl Chloride Monomer ("VCM"). VCM is polymerised to obtain PVC. All types of PVC resins are sold in the form of white or off white powder. The polymer degrades under high temperature and hence is invariably fortified with additives, known as stabilizers, before processing to yield useful products.

Essentially, PVC resins can be classified in to: Suspension resin, Specialty paste resin, also called emulsion or dispersion resin or micro-suspension resin and Copolymer resin.

Specialty paste PVC resin is used to make flexible products (such as artificial leather, gloves, tarpaulins, conveyor belts and coated fabrics). Suspension PVC is largely a basic product while specialty paste PVC resin is a specialty product. In India, Chemplast Sanmar and Finolex Industries Limited (Finolex Industries) are the only producers of specialty paste grade PVC resin.

**Specialty paste PVC market in India :**

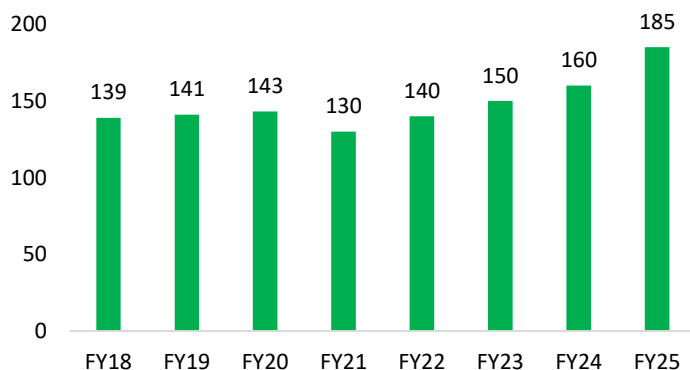
The specialty paste PVC resin market size in India was at 143 KTPA in financial year 2020. The market has been growing at a CAGR of 3% between financial years 2015 and 2020, driven by growth in the leather cloth industry, which contributes to 78% of the demand.



(Source: CRISIL Report)

**Specialty PVC resin consumption :**

Demand is expected to reach to 182 KT by 2025. Post Covid, the demand is recovering for PVC resin after a sharp fall in 2021. Demand growth is likely to remain healthy at 6-8% CAGR between financial years 2023 and 2025.



(Source: CRISIL Report)

### Structural changes in the specialty paste PVC resin market:

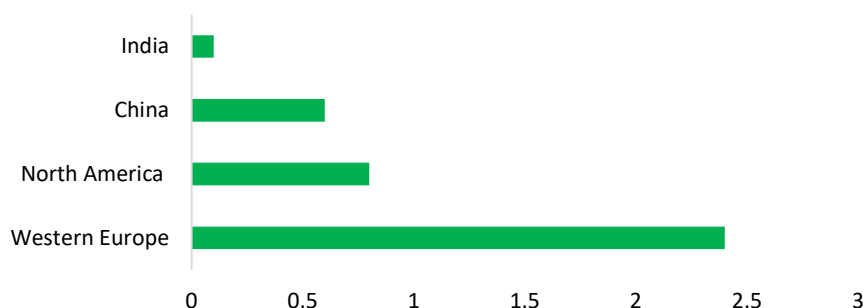
The specialty paste PVC resin market has been undergoing structural changes globally with many plants witnessing permanent shutdowns. Some key plant shutdowns were

- LG Chem -90 KTPA in Korea –2019
- Dongxing Chemical Co. Ltd. –100 KTPA in China –2019
- Vinnolit –100 KTPA in UK and Germany –2020
- Formosa Plastics Corp-65 KTPA in Delaware, USA –2018

As a result, India's imports of specialty paste PVC resin have shifted from South Korea (which held 44% share in imports in financial year 2016) to countries like China, Japan and Taiwan in financial year 2020. South Korea's share fell to 7% in financial year 2020, post shutdown of the LG Chem specialty paste PVC plant and tightness in supply.

### Key Growth Drivers:

The per capita consumption of specialty paste PVC resin in India is 0.1 kg compared with China's 0.6 kg and Western Europe's 2.4 kg. Thus, the Indian market is underpenetrated and has significant potential for demand growth in the coming years.



(Source: CRISIL Research)

### Lack of substitutes

Application of specialty paste PVC resin in leather cloth and other end uses has no major substitutes, which is a key factor driving demand growth, going forward.

### Leather footwear market has significant growth potential

Per capita footwear consumption in India is 1.7 pairs, compared to six pairs in developed markets. Assuming that this level of per capita demand for footwear in India will be reached by calendar year 2030, the overall demand for footwear could reach up to 9 billion pairs from 2.3 billion pairs as of today. The market is estimated to have witnessed a sharp decline in financial year 2021 due to a slump in demand induced by the COVID-19 pandemic. However, over a five-year period, demand is expected to recover and grow at 5-6% CAGR between financial years 2020 and 2025.

### Automotive market growth to lead

CRISIL Research expects the automotive market to grow at 7-9% CAGR between financial years 2020 and 2025. The industry grew at 6% CAGR between financial years 2015 to 2020, pulled down by a decline in demand in financial year 2020.

- Commercial vehicle production is expected to grow by 5-7% in the next 5 years (over a low base of financial year 2020 and despite a weak financial year 2021) on account of improvement in infrastructure expenditure and under penetration in light commercial vehicles. Demand is expected to increase during the period owing to an improvement in industrial activity, rising replacement volume and government's thrust on rural transportation.
- The passenger vehicle production is expected to witness 6-8% growth between financial years 2020 and 2025. Demand is expected to pick up post financial year 2021 due to rising disposable incomes, low passenger vehicle penetration and new model launches. Other factors that would aid demand are increasing urbanization, government support to farm incomes, and improved availability of finance.

- Two-wheeler production is expected to grow by a modest 4-6% CAGR between financial years 2020 and 2025. We expect the medium-term demand, especially post financial year 2021, to be supported by rising farm incomes and improving rural infrastructure, especially the government continues to invest in developing rural roadways.

The vehicle scrappage policy is expected to give a boost to automobile production. Thus, overall demand for automotive upholstery is also expected to witness growth, driven by rising automobile production, thus boosting overall demand for specialty paste PVC resin.

#### Government initiatives like Make in India to boost investment in artificial leather production:

The Government of India launched the 'Make in India' campaign on September 25, 2014, which is a major initiative designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property, and build best-in-class manufacturing infrastructure in India. Attracting foreign direct investments (FDI) and encouraging joint venture collaborations between foreign and Indian firms to manufacture in India is the major focus of this program. This will boost domestic manufacturing of artificial leather and reduce dependence on imports.

#### Usage of vinyl gloves rising rapidly post Covid-19 pandemic:

The COVID-19 pandemic has led to a significant surge in the market for vinyl gloves, which use specialty paste PVC resin as a raw material. Not only in India, but countries across the world have been ramping up their usage of vinyl gloves. The world demand has multiplied 3 to 4 times post COVID-19.

The pre COVID-19 per capita consumption of vinyl gloves was 150 to 200 in the USA, 100 to 150 in Europe, 6 to 9 in China and 2 to 3 in India. Considering a population of 1.3 billion, even small increases in per capita consumption of vinyl gloves could lead to a sharp rise in demand in India. The demand is expected to grow, even post COVID-19, as general awareness about health, safety and hygiene is rising across industries.

#### Lack of raw material availability and technology creates barriers to enter specialty paste PVC resin market:

The demand for specialty paste PVC resin has been growing at a healthy pace. However, approximately 50% of the demand is met using imports. Despite healthy demand, no new players have entered the specialty paste PVC resin market in several years. This is largely on account of lack of availability of raw material and technology. Thus, high entry barriers and limited competition is expected to benefit existing specialty paste PVC resin manufacturers in the medium term.

#### India's import duty on specialty paste PVC resin is in line with global rates:

Specialty paste PVC resin attracted an import duty of 10% from financial year 2020 in India, up from 7.5% in 2019.

Globally, import duty for polymers (under HS code 39) is 14% in Brazil, 10% in countries like Philippines and Malaysia, whereas it is 6.5% in China, Japan, United States (US) and European Union (EU). Hence, the import duty on PVC in India is in line with duty rates in global economies.

#### Different Grades of Specialty Paste PVC resin

- ❑ 123: A low molecular weight Dispersion Resin, with K value in the range of 59 to 61, recommended for use in low temperature applications in the area of leather cloth and wall paper. Can also be used as a blend component in rigid PVC formulation like rigid films.
- ❑ 124: A medium molecular weight Dispersion Resin, with K value in the range of 64 to 66, best suited for the leathercloth industry and for applications like dip moulding and rotomoulding.
- ❑ 120: A high-medium molecular weight Dispersion Resin, with K value in the range of 67 to 69, ideal for applications such as wall paper, dip moulding, rotomoulding conveyor belting and tarpaulin coating.
- ❑ 121: A high molecular weight Dispersion Resin, with K value in the range of 75 to 78, specially tailored for applications such as conveyor belting, wear layers of leather cloth and flooring.
- ❑ 128: An ultra-high molecular weight Dispersion resin, with K value in the range of 82 to 85, especially designed to meet requirements in conveyor belting, flooring and top coat in leather cloth.

#### Peer Comparison:

Finolex Industries Limited are the only manufacturers of specialty paste PVC resin in India apart from Chemplast Sanmar.

### Indian Specialty chemical overview

The chemicals industry supports India's agricultural and industrial development. It provides raw materials, intermediates and process chemicals industries such as for agro chemicals, detergents and soaps, textiles, paper, paints, pharmaceuticals, varnish.

Specialty chemicals segment clocked 8-9% CAGR from financial years 2015 to 2020, driven by an increase in domestic consumption from various end-user industries and rising exports. CRISIL Research expects this segment to clock 5-6% CAGR during financial years 2020 to 2025 driven by rising domestic consumption and exports. Exports accounts for 35-40% of revenue for key specialty chemicals players in India.

In financial year 2021, the industry witnessed a de-growth of 5-6% due to slowdown in economic activity which is likely to result in fall in demand from end use industries. The impact is expected to be significant on segments such as polymer additives, textile chemicals and colorants whereas segments such as agrochemicals, surfactants are likely to lend some support.

### Custom manufacturing

Custom manufacturing is the exclusive manufacturing of non-commercially available molecules for a specific company. These molecules are manufactured conforming to specific properties and processes. Custom synthesis is usually done at a small scale, where the quantity of produced molecule remains low as opposed to the practice of custom manufacturing, where large scale production of specific molecules or compounds are undertaken by a third-party manufacturer for a specific client.

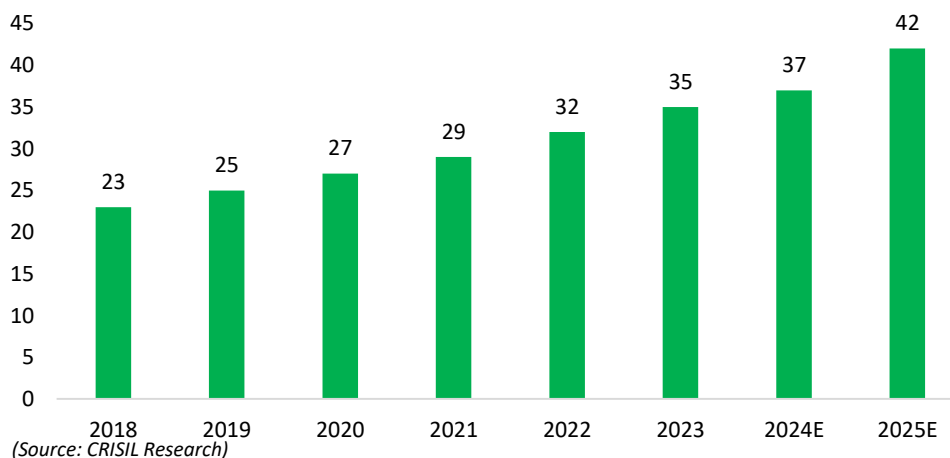
Custom manufacturing is preferred by pharmaceuticals and agrochemical manufacturers. The major reasons for opting for custom manufacturing are:

- Non availability of assets at the customer end to handle multi step synthesis.
- Low-cost alternatives for manufacturing of specific molecules in the regions with low cost of production.

### Global custom manufacturing market review and outlook

The global demand for custom manufacturing and synthesis grew from around \$ 19 billion in 2015 to \$ 25-27 billion by 2020, owing to increased demand from the pharmaceutical and agrochemical sector.

Demand is expected to grow at 8-10% between 2020 and 2025 compared with 6-8% seen between 2015 and 2020.



### Regulatory boost for domestic industry

The recent supply disruption in the wake of the COVID-19 pandemic has resulted in the government taking proactive steps to boost domestic manufacturing and bring down the costs. A regulatory boost, along with strong process chemistry skills will continue to help the Indian bulk drugs and formulation industry garner a big share of the global exports pie. The company expect growth to pick up in the coming years on account of product diversification and increased global demand.

### Peer Comparison

Deccan Fine Chemicals, Anupam Rasayan, Chemplast Sanmar Ltd., SRF, Hikal and PI Industries Limited are some of the key manufacturers in custom manufacturing market space. These companies have businesses spanning both pharmaceutical and agrochemicals, with manufacturing contracts (small and large scale) and distribution contracts from global corporations.

**Company – Business Model****Products & Production Facilities:**

The company has the following production facilities and capabilities.

**Mettur, Tamil Nadu**

The Mettur facility has a specialty paste PVC plant, a caustic soda plant, a chloromethane plant, a hydrogen peroxide plant and a refrigerant gas plant. It manufactures specialty paste PVC resin, caustic soda, chlorine, hydrogen, chloromethanes, hydrogen peroxide and refrigerant gas at this facility. The Mettur facility is automated with distribution control systems. This facility sources power from a coal-based captive power plant of 48.5 MW and, if necessary, from the Tamil Nadu Generation and Distribution Corporation Limited (“TANGEDCO”). The Mettur Facility also has two diesel generators to meet emergency power requirements. The Mettur Facility depends on the water drawn from the Stanley reservoir for supply of water. In addition, the company has leased a salt field from the Government of Tamil Nadu at Vedaranyam, Tamil Nadu, to ensure a stable supply of one of the raw materials for the production of caustic soda, salt. Additionally, it operates the manufacturing facility on parcels that are held by the company on a leasehold as well as a free hold basis.

The following table sets forth the installed production capacity of each manufacturing plant in the Mettur Facility as of March 31, 2023 and the capacity utilizations for the Financial Years 2021, 2020 and 2019:

**Capacity:**

Production Plant	Installed production capacity (in kt)	Capacity Utilization (FY2021)	Capacity Utilization (FY2020)	Capacity Utilization (FY2019)
Specialty Paste PVC resin	66	91%	100%	96%
Caustic soda	67	64%	82%	102%
Chloromethanes	35	91%	99%	100%
Hydrogen Peroxide	34*	42%	21%	-**
Refrigerant gas	1.7	30%	75%	39%

\* The hydrogen peroxide capacity is calculated at 50% concentration level in line with industry standards

\*\* The hydrogen peroxide plant was commissioned in Financial Year 2020

(Source: Company Filings, Arian Research)

**Berigai, Tamil Nadu**

The Berigai Facility is involved in the custom manufacturing of starting materials and intermediates. It is a batch operated multi-purpose plant with a range of glass lined and stainless steel reactors and other allied equipment. The company can manufacture various products depending on the customer requirements. The Berigai Facility is automated with distributed control systems and modern technologies. As of March 31, 2021, the Berigai Facility also had capabilities to support development work in various chemistries such as cyanation, hydrogenation and distillation at the laboratory scale and pilot scale (less than 5 kg/batch). The Berigai Facility sources power from TANGEDCO. The Berigai Facility also have three diesel generators to meet emergency power requirements. Further, the Berigai Facility has an uninterrupted power supply source as an additional safety purpose for the critical process equipment. The Berigai Facility sources water from the bore well.

The following table sets forth the installed production capacity and operating production capacity and capacity utilization at our Berigai Facility:

Capacity	FY2023 Capacity (MTPA)	FY2021 Capacity Utilization (%)	FY2020 Capacity (MTPA)	FY2020 Capacity Utilization (%)
Installed production capacity	1068	62%	1032	64%
Operating production capacity	934	71%	904	74%

(Source: Company Filings, Arian Research)

**Karaikal, Puducherry**

The Karaikal Facility has a caustic soda plant and an EDC plant. The Karaikal Facility is equipped with automated distribution control systems. The Karaikal Facility sources power from the Puducherry Electricity Department and it also has two natural gas-based captive power plants of 8.5 MW and 3.5 MW respectively. The Karaikal Facility primarily depends on the two desalination plants for supply of water and, if necessary, it depends on the bore well water supplied by the Pondicherry Agro Service and Industries Corporation Limited.

The Karaikal Facility also has a low sulphur heavy stock oil fired boiler and two waste heat recovery boilers. The company has also leased a salt field from the Government of Tamil Nadu at Vedaranyam, Tamil Nadu to ensure a stable supply of one of the raw materials, salt. Additionally, it operates the manufacturing facility on parcels that are held by the company on a leasehold as well as a free hold basis.

The following table sets forth the installed production capacity of the caustic soda plant at the Karaikal Facility:

Production plant	Installed production capacity (in kt)	FY2021 Capacity Utilization (%)	FY2020 Capacity Utilization (%)	FY2019 Capacity Utilization (%)
Caustic Soda	52	36%	57%	65%
EDC (Captive Purpose)	84			

*(Source: Company Filings, Arianth Research)*

**Cuddalore, Tamil Nadu**

The Cuddalore Facility has a suspension PVC resin plant with an installed production capacity of 300 ktpa. The Cuddalore Facility sources power from the State Electricity Board and certain third-party sources. The Cuddalore Facility primarily depends on the desalination plant for supply of water. It also has a rainwater harvesting mechanism. The Cuddalore Facility also has a coal-fired boiler for generating steam.

The capacity utilization for the Financial Years 2021, 2020 and 2019 was 88%, 91% and 95%, respectively.

All the company’s facilities in 4 locations have Zero Liquid Discharge feature, thereby going highly ESG compliant.

**State-of-the-art Manufacturing Units**



**Mettur Facility**



**Berigai Facility**

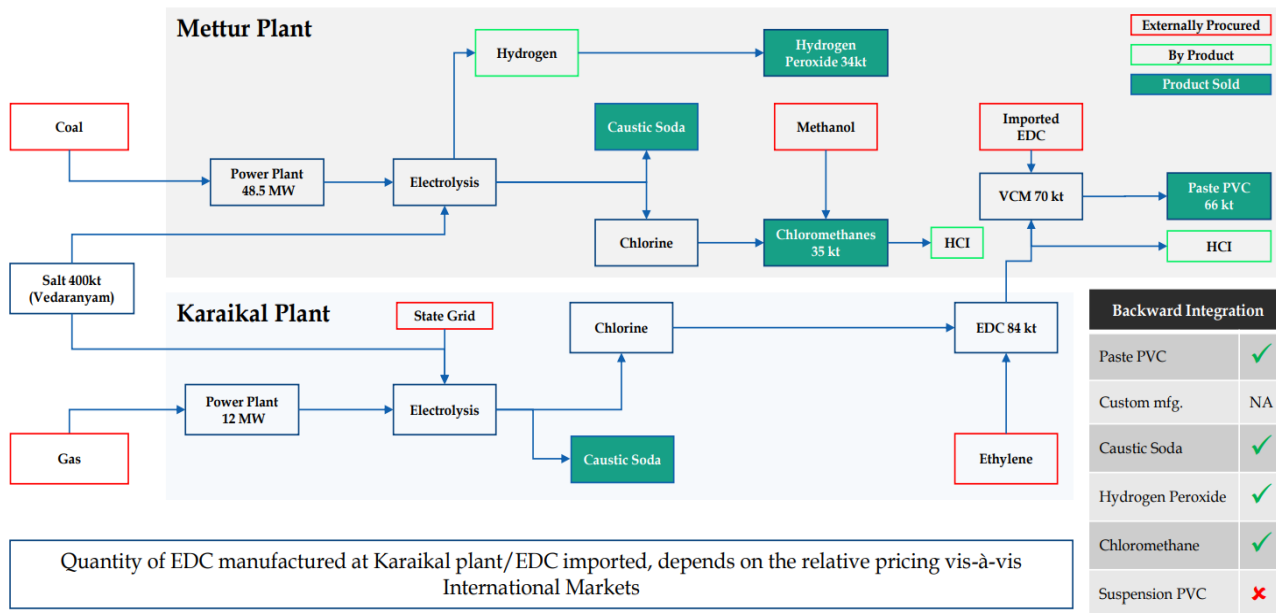


**Karaikal Facility**



**Cuddalore Facility**

Manufacturing Process



(Source: Company Filings, Arihant Research)

Specialty paste PVC resin

Specialty paste PVC resin is produced by polymerization of VCM. The manufacturing process begins with breaking down the VCM liquid into fine droplets using a high pressure pump and passing it through an orifice. Thereafter, treat the atomized VCM with special chemicals in a controlled pressure and temperatures conditions to achieve the desired product properties. The unreacted VCM is thereafter recovered and recycled to process via the intermediate storage tanks. On completion of the reaction, the contents are transferred to an intermediate storage tank and the PVC latex is stripped by applying open steam. The stripped PVC latex is stored in a tank and fed to a spray drier through a colloid mill. The dried PVC in fine free flowing form is separated through a bag filter system. The specialty paste PVC resin is thereafter packed and stacked for sale.

Chloromethanes

Chloromethanes includes methyl chloride, MDC, chloroform and CTC. These products are manufactured in two steps. First, methanol and hydrogen chloride are reacted under high temperature to form methyl chloride. Thereafter, methyl chloride is reacted with chlorine to form a mixture containing all three chloromethane products. The mixture is separated in distillation columns and filled in separated containers for each product.

Caustic soda, chlorine and hydrogen

Caustic soda and chlorine are produced as joint products by electrolyzing a solution of sodium chloride. Hydrogen is produced as a value added products during the manufacturing of caustic soda. Caustic soda is produced at 32% concentration levels and thereafter further concentrated to 48-50% for sale to customers. Majority of the chlorine is captively consumed and we sell a small portion of chlorine to third party customers. Hydrogen is compressed to medium pressure which is then used for production of hydrogen peroxide.

Hydrogen peroxide

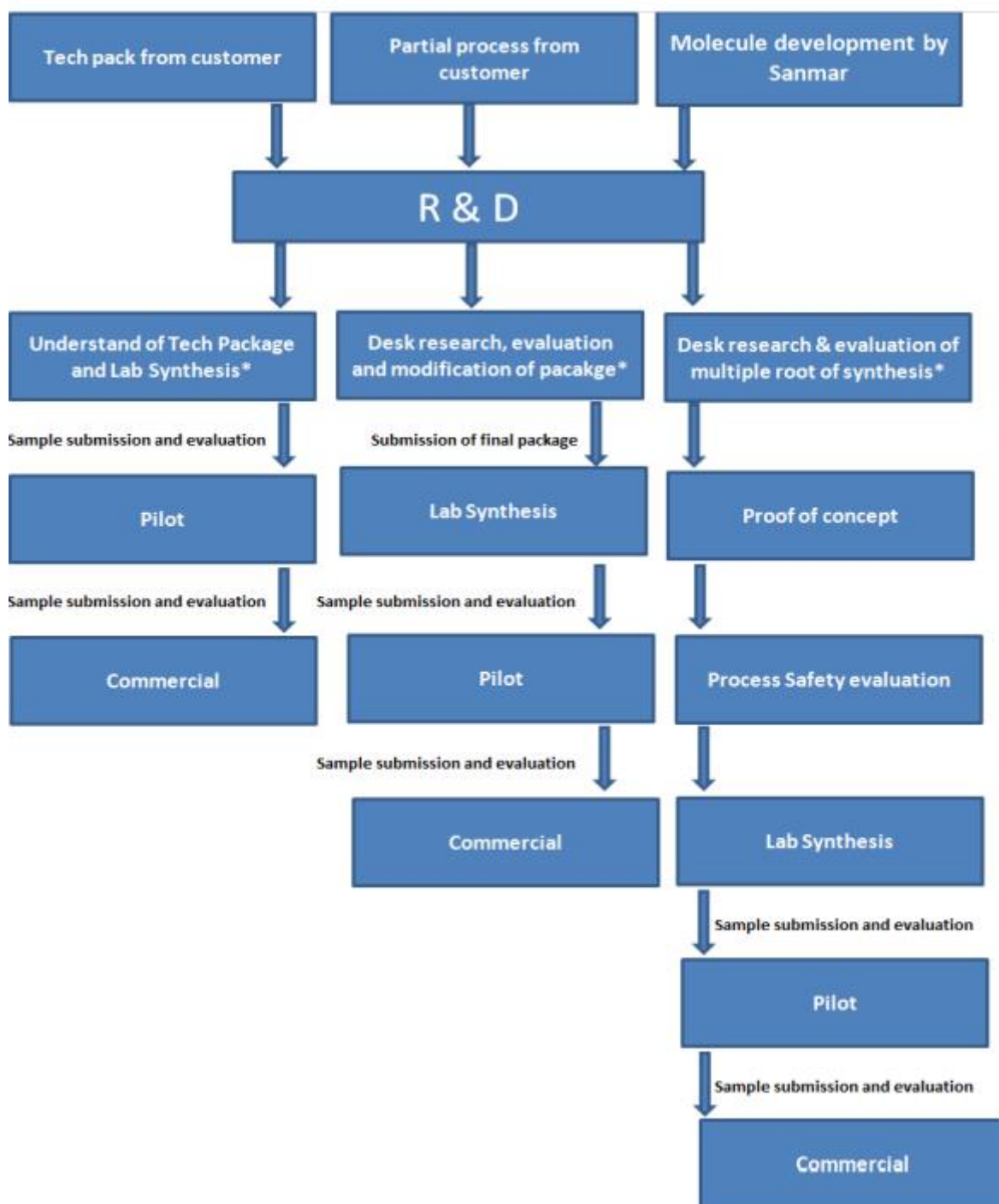
Hydrogen peroxide is synthesized in two steps. First, the anthraquinone is reduced to the corresponding anthrahydroquinone by hydrogenation. Thereafter, it is oxidized by bubbling compressed air through the solution of anthrahydroquinone and hydrogen peroxide is formed and anthraquinone solution is regenerated. The hydrogen peroxide is thereafter extracted from the anthraquinone solution. Hydrogen peroxide is produced at 50% concentration levels. The company owns the technology know how to manufacture hydrogen peroxide.

Suspension PVC resin

The raw materials are first added into a polymerization reactor. Thereafter, the mixture is heated and the unreacted VCM in vapor phase is thereafter recovered and recycled to process via the intermediate storage tanks. On completion of the reaction, the product PVC slurry contents are transferred to an intermediate storage tank and the PVC slurry is stripped by applying open steam. The stripped PVC slurry is stored in a tank and fed to the slurry centrifuges. The water is removed from the slurry and thereafter fed to the fluid bed drier. The dried PVC in fine free flowing form is conveyed to storage silos. The suspension PVC resin is thereafter packed and stacked for sale.

**Custom manufacturing operations**

The in-house process research, process engineering and large scale manufacturing capabilities, enable us to act as a one-stop shop for process scale up and large scale manufacturing of newly discovered molecules. The company provides a spectrum of services across the value chain that includes research, process development and scale-up, analytical studies, plant engineering and commercial scale manufacturing. The team works closely with existing and prospective customers, and provides innovative and cost effective solutions tailored to meet specific customer requirements. It is providing services to six multinational innovator companies and manufacturing seven products, as of March 31, 2021. It does not enter into long-term agreement for our custom manufacturing operations and the actual volumes and specifications of customer orders are fixed on purchase order basis. It believes that the focus on early stage participation enables it to capitalize on the complete lifecycle of these products, gives it the opportunity to be the initial suppliers for such molecules under global patents and strengthens its relationships with multinational innovator companies.



(Source: Company filings, Arihant Research)



### Supply Chain Operations

The primary raw materials include

- VCM, EDC, ethylene and chlorine in respect of specialty paste PVC resin;
- Salt and power in respect of caustic soda;
- Methanol and chlorine in respect of chloromethanes;
- Hydrogen in respect of hydrogen peroxide;
- VCM in respect of suspension PVC resin.

It has a backward integrated part of the manufacturing process by producing key raw materials, EDC, VCM and chlorine. It has an EDC plant at our Karaikal Facility with an installed production capacity of 84 kt. It also owns a coal-based captive power plant of 48.5 MW at the Mettur Facility, two natural gas-based captive power plants of 8.5 MW and 3.5 MW, respectively, at the Karaikal Facility, and have leased a salt field from the Government of Tamil Nadu at Vedaranyam, Tamil Nadu. It does not own premises for its registered office. Further, it operates the manufacturing facility on parcels that are held by the company on a leasehold as well as a free hold basis.

For the custom manufacturing operations, it has access to various basic chemicals at its manufacturing facilities such as hydrogen, chlorine and caustic soda. It purchases EDC from third parties to fill the gaps in the requirements based on production needs for quantity or if the pricing is more favorable. It sources:

- EDC from Saudi Arabia and Qatar;
- Ethylene from Saudi Arabia, Qatar, Singapore, Malaysia and Indonesia;
- Coal from Indonesia;
- Methanol from Saudi Arabia;
- VCM for suspension PVC resin from Qatar, Japan, China, Indonesia, Germany and France.

It typically enters into supply contracts with its vendors for a period of one to two years for the supply of EDC, ethylene, methanol and coal. It has been procuring EDC, ethylene, methanol and coal from suppliers, through relevant sourcing partners, for over seven, 12, 10 and 10 years, respectively. The average annual requirement of VCM to be used for manufacture of suspension PVC resin is 300 kt and it has been procuring it from suppliers, through a sourcing partner, for over 10 years. It also enters into purchase orders for supply of its raw materials. The terms and conditions on warranties for product quality and return policy are specified in the purchase orders. The purchase price of its raw materials generally is in line with the market prices.

It sources the raw materials from a limited number of suppliers and any delay, interruption or reduction in the supply of raw materials to manufacture our products may adversely affect our business, results of operations, cash flows and financial condition. It usually purchases raw materials based on historical levels of sales, actual sales orders on hand and the anticipated production requirements taking into consideration any expected fluctuation in raw material prices and delivery delay.

The following table sets forth the average annual requirement of their raw materials:

Raw Material	Average annual requirement
EDC	110 kt*
Ethylene	16 kt**
Methanol	12 kt
Coal	275 kt
VCM (for CSL)	70 kt***
VCM (for CCVL)	300 kt

*\*This includes EDC that is manufactured at its own facilities*

*\*\* Based on the assumptions that 60 KT per annum of EDC is manufactured at its facilities*

*\*\*\* Average annual consumption for company is entirely manufactured at its facility*

*(Source: Company filings, Arian Research)*

### Storage Capacity and Process

The manufacturing facilities are strategically located in the South India region to serve the end-user industries located in South and East India with competitive freight costs.

Karaikal Facility is strategically located close to the coast line and it has a marine terminal facility. The marine terminal facility is connected to the shoreline by a 1.3 km trestle platform with the ability to handle ships of up to 10,000 DWT capacity. This enables the company to transport its raw materials such as ethylene as well as finished products such as caustic soda in a more cost efficient manner. The Cuddalore Facility has a marine terminal facility, located one km from the shoreline, with the ability to handle ships of around 10,000 DWT capacity. The marine terminal facility is connected to the Cuddalore Facility by way of underground pipes enabling us to transport VCM directly to the storage tanks. Further, the Cuddalore Facility has an island type, open jetty facility with available draught at the berth location of 10.5 m. The marine terminal facility consists of one loading arm through which it can unload VCM.

It stores ethylene in a double walled insulated cryogenic tank with a capacity of 4 kt at the Karaikal Facility. It has a safety pressure relief and vacuum breaker and safety rupture disc, a medium velocity water spray system, a boil-off recovery system to maintain tank pressure and ambient ethylene monitors and smokeless flaring systems. At its Cuddalore Facility, VCM is stored in two refrigerated atmospheric storage tanks with a capacity of 7,500 MT each.

It usually keeps 15-60 days of inventory of raw materials at its facilities. The ability to store raw materials at its facilities enables it to withstand disruptions in supply as well as volatility in the price of raw material for a short duration. These inventory levels are planned based on contractual quantities and expected orders, which are confirmed due to its long-standing relationship with customers. It maintains a lead time material requirement planning system and utilize a financial accounting and controlling system to manage its levels of inventory. The storage facilities allow it to avoid suspending our production processes, which are costly and time consuming to restart, and also enable it to accumulate products to satisfy market demand effectively during peak times by being able to meet customers' demand in full and on time.

The following table sets forth our capacity to store finished products at its manufacturing facilities:

Finished Product	Capacity (MT)
Specialty Paste PVC resin	2,500
Caustic Soda	6,400
Chloromethanes	
- MDC	350
- Chloroform	350
- CTC	600
Refrigerant gas	80
Hydrogen Peroxide	400
Suspension PVC resin	800

*(Source: Company filings, Arianth Research)*

In addition, it stores finished products at depots of consignment agents and at leased depots in Mumbai and Delhi.

### Clientele

It has established a broad customer base with long-standing relationships. During the Financial Years 2021, 2020 and 2019, it derived approximately 82%, 80% and 84% of its revenue from operations, respectively, from sale of its products to its longstanding customers (relationship of more than 10 years). Further, during the Financial Years 2020 and 2019, CCVL derived approximately 78% and 78% of its revenue from operations, respectively, from the sales of its products to its longstanding customers (relationship of more than 10 years).

Clients are spread across a wide array of industries such as:

- Agro-chemicals,
- Artificial leather,
- Paper, and
- Pharmaceuticals.

Further, a significant proportion of its revenue continues to be generated from customers with whom it has long-standing relationships.

### Region-wise Sales

Chemplast Sanmar Ltd. sells its products to customers based in India and other various countries. The following table sets forth the percentage of total sales of CSL's products derived from north, south, east and western regions of India:

Product	North	South	East	West
Specialty Paste PVC resin	65%	14%	1%	20%
Caustic Soda	0%	86%	1%	13%
Chloromethanes	8%	61%	2%	28%
Refrigerant gas	18%	44%	1%	37%
Hydrogen Peroxide	1%	89%	3%	7%

(Source: Company filings, Arianth Research)

In addition, it sells its products that are custom manufactured by the company to customers based in Europe.

The following table highlights the total sales of CCVL of suspension PVC resin:

Product	North	South	East	West
Suspension PVC resin	1%	79%	13%	8%

(Source: Company filings, Arianth Research)

The following table sets forth the details of total sales of CSL's products within and outside India:

Particulars (INR, Mn)	FY2021	FY2020	FY2019
Domestic Sales	36,221	11,363	11,661
Export Sales	1,766	1,214	883

(Source: Company filings, Arianth Research)

The following table sets forth the details of total sales of CCVL's products within and outside India:

Particulars (INR, Mn)	FY2021	FY2020	FY2019
Domestic Sales	25,081	18790	20,523
Export Sales	22	0	0

### Intellectual Property

The company has two registered trademarks as of 31<sup>st</sup> March 2021, each under class 1, granted by the Registrar of Trademarks, namely "Chemplast" (word mark) and "Chemplast" (label). Pursuant to a letter dated May 20, 2019, it has granted CCVL a royalty-free, non-exclusive, personal and non-transferable right to use the "Chemplast" (word mark) and "Chemplast" (label) in relation to CCVL's business of suspension PVC resin. Additionally, pursuant to a letter dated March 22, 2021, the Promoter has granted the Company, a royalty free, non-exclusive, personal, non-transferable right to use the trade name / trade mark.

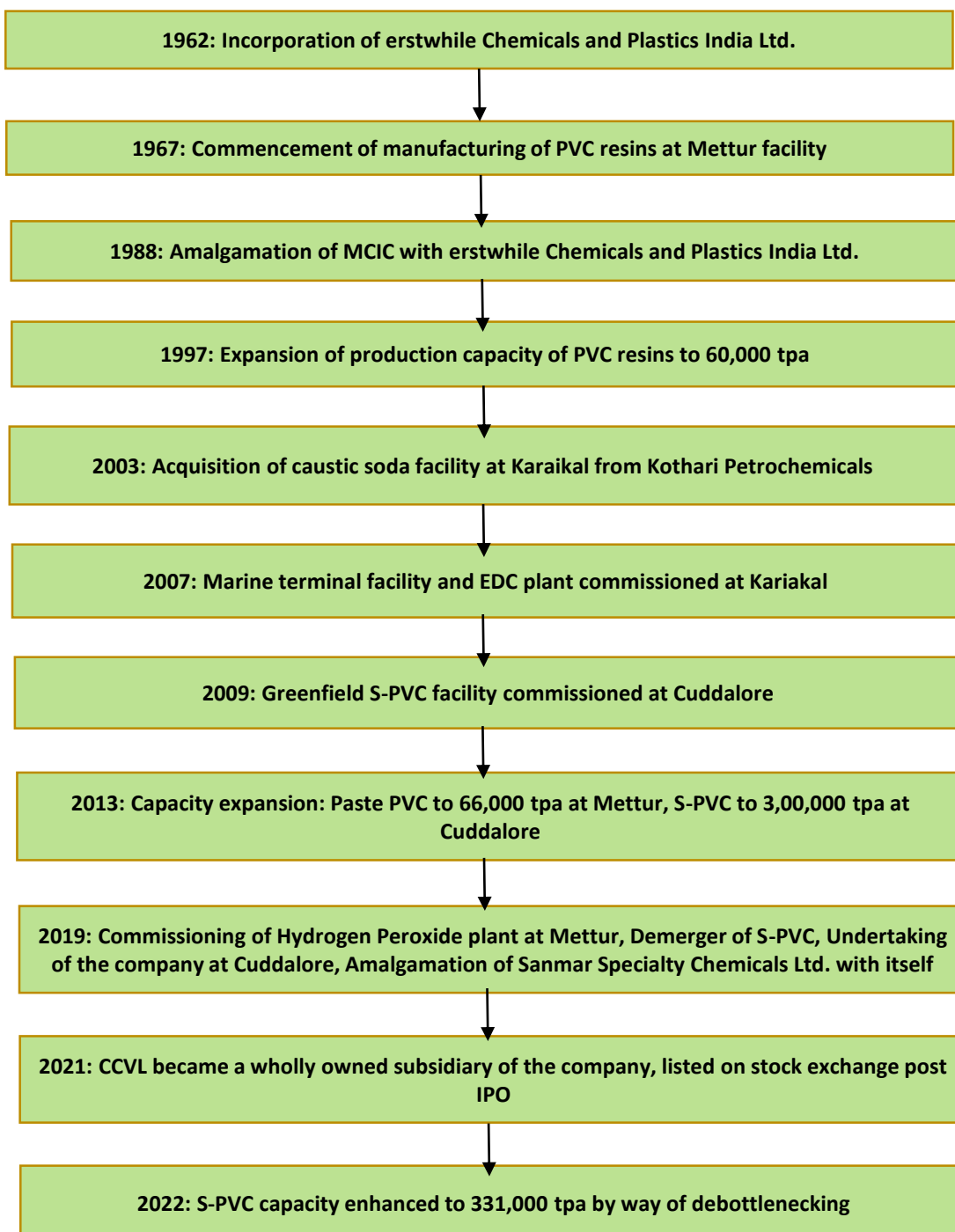


It has also registered several domain names such as "chemplast.co.in"; "chemplast.in"; "chemplastsanmar.co.in"; "chemplastsanmar.in" and "chemplast.net". The company has also purchased the manufacturing technology and know-how for hydrogen peroxide in 2017. Accordingly, the company has the perpetual right to use, license and sublicense the same anywhere globally.

The company had entered into a technology license agreement dated April 30, 2006 with Ineos Vinyls UK Ltd. for the non-exclusive, non-transferable right to use technical information and know-how for, among other things, manufacturing suspension PVC resin and technology for the use of PVC additives owned by Ineos Vinyls UK Ltd. and authorized to license in the territory of India.

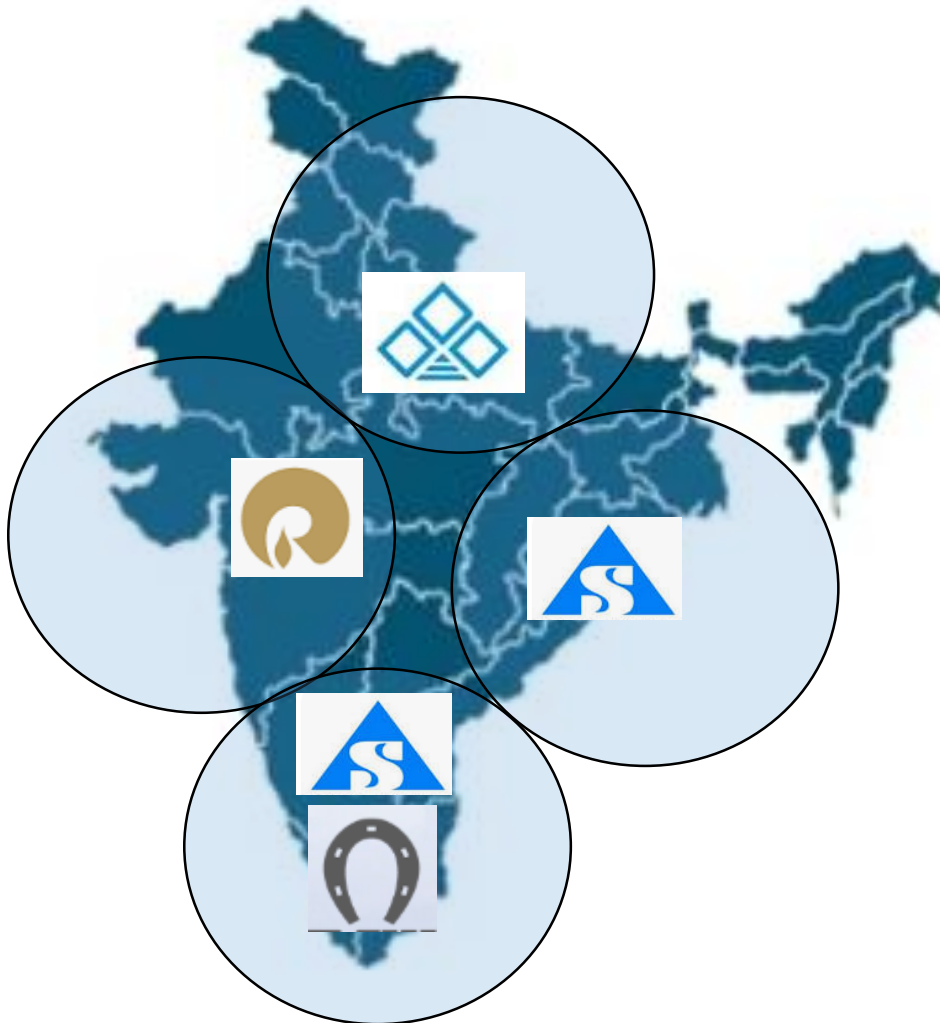
Further, it granted Ineos Vinyls UK Ltd, a royalty-free, non-exclusive right to use world-wise any improvements developed by our Company during the term of the agreement, including the exclusive right to license such improvements solely to other Ineos Vinyls UK Ltd. licensees. The agreement was valid till April 30, 2016. However, certain clauses including the rights to use the technology survived the expiration of the agreement. The agreement was subsequently transferred to CCVL pursuant to the demerger of suspension PVC resin undertaking from the company as per the NCLT order dated April 26, 2019. Accordingly, CCVL has the right to use the technology.

### Major milestones



**Competitive Landscape**

The major revenue contributor of Chemplast Sanmar Ltd. is Suspension PVC (S-PVC). The top 3 manufacturers of S-PVC in India are Reliance Industries Ltd. (RIL), Chemplast Sanmar and Finolex Industries.



**Reliance Industries Ltd. dominate the Western markets**



**Chemplast Sanmar has significant presence in the Southern markets**



**DCW Ltd. has significant presence in the Southern markets**



**DCM Shriram has sizeable presence in the Northern markets**

Reliance Industries is integrated backward as it produces ethylene, chlorine, EDC and VCM at its petrochemical plants located in Gujarat. Chemplast Sanmar's S-PVC plant is located at Cuddalore, which has a captive import terminal facilitating VCM imports for PVC production. It sells majority of its produce to customers in South and East India. Finolex Industries has production units for EDC and VCM, which partly meet its raw material requirement for PVC. DCM Shriram produces PVC through the calcium carbide route. In this process, Acetylene (produced from calcium carbide) is reacted with Hydrochloric acid to produce VCM, and then the VCM is polymerised to make PVC.

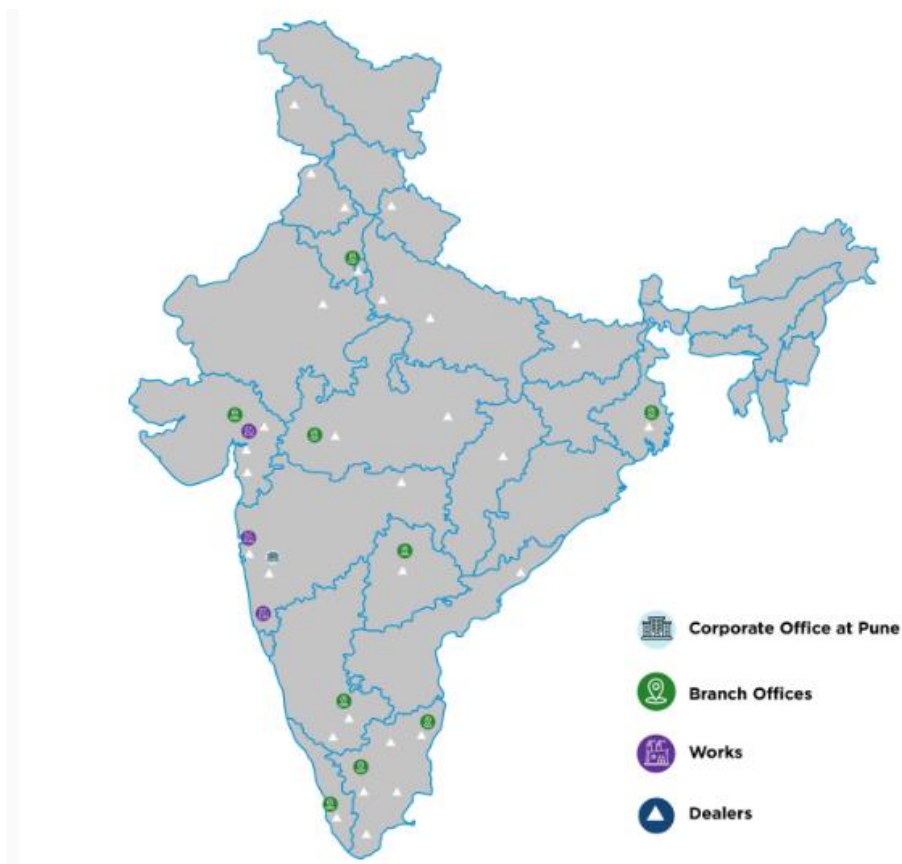
The following table presents a profile of key players operating in the S-PVC sector

Backward Integration									Forward Integration
Player	Capacity (KTPA)	Location	Region	Calcium Carbide	Ethylene	Chlorine /HCl	EDC	VCM	
Reliance Industries Ltd.	770	Dahej, Vadodara, Hazira (Gujarat)	West						
Chemplast Sanmar	331	Cuddalore (TN)	South						
Finolex Industries Ltd.	272	Ratnagiri, Maharashtra	West						
DCW	90	Tuticorin (TN)	South						
DCM Shriram	82	Kota (Rajasthan)	North						

(Source: Company filings, Arianth Research)

#### Finolex Industries Ltd.

Finolex Industries Ltd. is amongst the largest and backward integrated PVC Pipes and Fittings manufacturer in India. With an annual production capacity of 3,70,000 MT for pipes and fittings and 2,72,000 MT of PVC resin, the company is the most trusted brand in the country with a wide range of products with applications in agriculture and plumbing & sanitation sectors. The company has three state-of-the-art manufacturing facilities in Maharashtra and Gujarat and has a vast distribution network.



**Reliance Industries Ltd.**

Reliance is India's largest manufacturer of suspension grade Polyvinyl Chloride (PVC - **Reon**) with a wide range of viscosities. Reliance has adopted the world acclaimed EDC/Ethylene process to ensure consistency in resin quality.

Reon finds use in agriculture (rigid pipes and fittings, flexible tubes, hoses); building and construction (doors, windows, partitions / floor / wall coverings); packaging (bottles and containers, blister packaging); electrical and electronics (wires, cables, electrical conduits); health care (blood bags, tubing, heart catheters, IV fluid bags); and consumer goods (toys, sports goods and footwear).

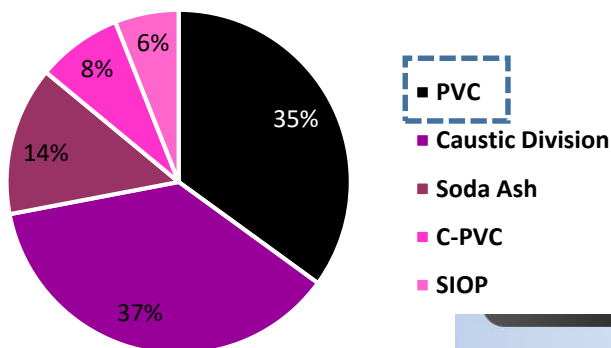
REON GRADES: TYPICAL PROPERTIES				
Grades	K-Value	Porosity (DOP Absorption) ml/g	Bulk Density g/ml	Typical Applications
57-01	57	0.22 - 0.34	0.48 - 0.54	Pipe fittings, Foam board, Cooling tower frills
57GMRO1				
57-11	57	0.22 - 0.34	0.48 - 0.54	Calendered blister film, Bottles
57GERO1				
60-11	60	0.22 - 0.34	0.48 - 0.54	Calendered blister film, Bottles
60GERO1				
67-01	67	0.21 - 0.29	0.51 - 0.59	Pipes, Rigid films, Doors & Window profiles, Corrugated sheets, Cable channels, Casing & Capping, PVC flooring.
67BERO1/67GERO1				
67-11	67	0.30 - 0.34	0.48 - 0.56	W&C compounds, Shoe compounds, IV Fluid and Blood bags, Film, Flexible sheets, Tubing.
67GEFO1				

(Source: Company Filings, Aриhant Capital)

**DCW Ltd.**

It has two state of the art manufacturing facilities located in Dhrangadhra, Gujarat and Sahupuram, Tamil Nadu. Its product basket include **Poly Vinyl Chloride (PVC)**, Soda Ash, Caustic Soda, intermediate chemicals and specialty chemicals like Synthetic Rutile, Synthetic Iron Oxide Pigments (SIOP) and Chlorinated Poly Vinyl Chloride (C-PVC).

FY23 Revenue Mix



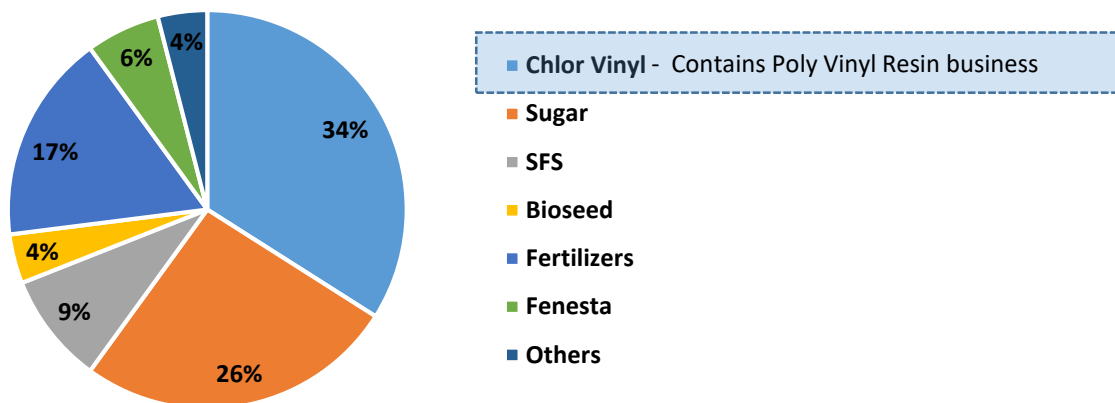
Manufacturing facility



**DCM Shriram**

The product portfolio of the company includes multiple grades of PVC resins to the tune of 82,000 TPA produced at the integrated manufacturing complex in Kota. It caters to a wide array of end-use markets.

The PVC Resins are manufactured through the Calcium Carbide route that insulates it from the cost-cycles routinely associated with the petrochemicals based production of other manufacturers.

**FY23 Revenue Mix**

(Source: Company Filings, Arihant Capital)

The Plastics business of DCM Shriram involves manufacturing of PVC Resins and Calcium Carbide. The company is one of the oldest manufacturers of PVC Resins in the country with over five decades of experience in the business. The Plastics business is an integral part the Chloro-Vinyl manufacturing facility at Kota with backward integration in terms of own Captive Power, Chlorine and Calcium Carbide.

DCM Shriram Ltd. is the only company in the country which manufactures PVC Resin through the Calcium Carbide route as against the Ethylene route which is being followed by most of the countries worldwide with exception of China. PVC Resin is a synthetic resin made from the polymerization of vinyl chloride with 57% chlorine and 43% carbon content.

It is the third largest plastic in production and finds uses in a wide variety of products like pipes and fittings, profiles and tubes, windows and doors, sidings, wires and cables, film and sheets and other moulded products and floorings. The fact that PVC products can last up to 100 years; can be recycled and can provide products with good quality to price ratio, greatly reduces life cycle costs of PVC.

- In India, more than 70% of PVC Resin gets consumed for producing PVC pipes & fittings for use in agriculture & construction as against ~45% for the world.
- The other key drivers for PVC Resin is the growth coming from applications other than pipes such as packaging, profiles,
- pharmaceuticals segments, etc. which are expected to account for a higher share of the demand for PVC Resins in the years to come.

Calcium Carbide is used in the production of dissolved acetylene gas and desulphurizing (DS) compound besides production of PVC resin.

**Business Performance of Vinyl Segment (contains PVC):**

Year	PVC Resins		Carbide	
	Sales (MT)	Realizations (INR/MT)	Sales (MT)	Realizations (INR/MT)
FY22	67,193	1,34,404	17,309	1,03,655
FY21	63,839	98,692	12,409	62,459
<b>% Change</b>	<b>5.3%</b>	<b>36.2%</b>	<b>39.5%</b>	<b>66.0%</b>

(Source: Company Filings, Arihant Capital)



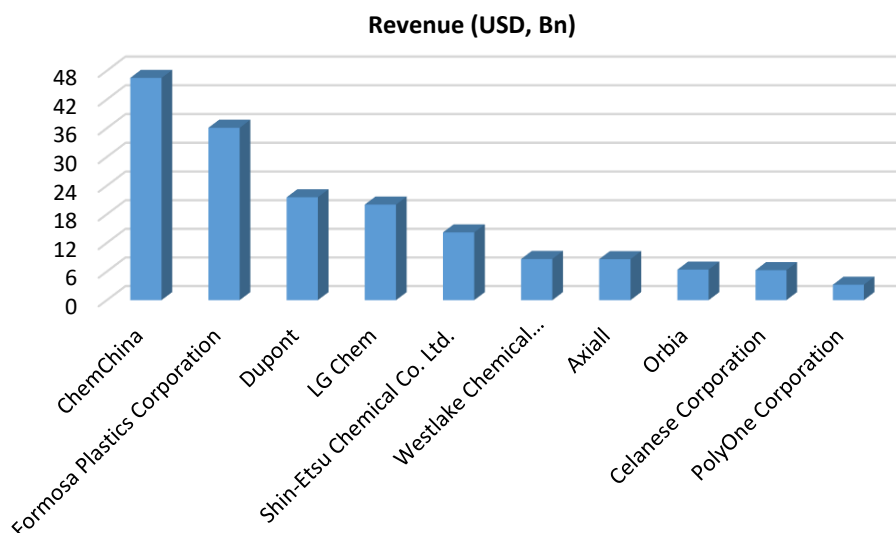
## International Competitors

## Top 10 PVC Suppliers in Terms of Production Volume:

Company Name	PVC Production Capacity (KT)
Shin-Etsu Chemical Co. Ltd.	3850
Formosa Plastics Corporation	3300
Inovyn ChlorVinyls Ltd.	2500
ChemChina	1950
Orbia	1800
Westlake Chemical Corporation	1800
Oxy Vinyls (Occidental Corporation)	1700
CNSG Anhui Hong Sifang Co. Ltd.	1500
LG Chem	1500
Axiall	1200

(Source: Plasticranger.com, Arihant Capital)

## Top 10 PVC Manufacturers in the World by Revenue



(Source: Plasticranger.com, Arihant Capital)

**Formosa Plastics Corporation (FPS)**

Formosa is a Taiwanese plastics company primarily known for manufacturing and supplying PVC resins and other intermediate plastics products. The company was founded in 1954 by Wang Yung-ching and Wang Yung-Tsai. Their first PVC plant was constructed in **Kaoshuing**, and production began in 1957.

FPS owns many subsidiaries in Taiwan as well as in other countries. They have a significant presence in the United States, and their American Subsidiary, Formosa Plastics Corporation, USA, was founded in 1978, which in turn created four wholly-owned chemical manufacturing subsidiaries in Delaware City, Delaware, Illiopolis, Illinois, Baton Rouge, Louisiana, and Point Comfort, Texas.

Millions of Taiwanese Dollars	Capital	Assets	Equity	Sales	Income Before Taxes	Number of Employees
Formosa Plastics Corporation	63,657	4,89,234	3,57,685	1,95,087	42,583	6,379

(Source: Company Filings, Arihant Capital)

**Shin Etsu**

The Group became one of the first Japanese chemical manufacturers to establish a polyvinyl chloride manufacturing base overseas. Shintech (U.S.) began operations in 1974 with yearly production of 100,000 tons of PVC and has carried out numerous expansions. Today, it has expanded its annual PVC production capacity to 2.95 million tons. The Shin-Etsu Group is amongst the largest manufacturer of PVC in the world, and has PVC manufacturing plants in the U.S., Europe and Japan with annual production of approximately 4 million tons, and is reliably supplying superior quality material throughout the world.

Revenues (100 millions of yen)	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20	Mar-21
PVC (Chlor-Alkali Business)	4278	4526	4417	4116	5013	5242	4843	4697

(Source: Company filings, Arihant Capital)

**Competition from China – An influencer in the Global PVC Industry**

China is the world’s largest producer and consumer of PVC resin. There are more than 70 PVC resin producers in China. Three out of these manufacturers have an annual production capacity of atleast one million tons.

The Northwest region is the PVC Dominant Sphere or the PVC manufacturing hub of the country. However, other regions also contribute to the chemical manufacturing in a sizeable manner.

The below map depicts the PVC Dominant Sphere in China:



(Source: China-Direct.Biz, Arihant Research)

The below historical table gives an estimation of the PVC manufacturing by sub-region and by manufacturing route:

**Indicative: Annual Production Capacity of PVC Resin in China in 2019 (Unit: 1,000 tons)**

Areas	Calcium Carbide	Ethylene/Vinyl	Sum	%
Northwest (i.e. Xinjiang, Qinghai)	12,290	300	12,590	50%
North (i.e. Inner Magnolia)	3,770	2,450	6,220	24.7%
East	830	1,810	2,640	10.5%
Central	1,600		1,600	6.4%
Southwest	1,420		1,420	5.6%
Northeast	490		490	1.9%
South		220	220	0.9%
<b>Total</b>	<b>20,400</b>	<b>4,780</b>	<b>25,180</b>	<b>100%</b>

(Source: Company filings, Arihant Capital)

**Current Scenario:**

In FY23, prices of PVC resin declined by approximately 45% - 50% in the first half of the financial year, before recovering in the third quarter. However, prices again began their downtrend in the fourth quarter.

The decline in PVC prices was attributed to significant imports from China in India. In the fourth quarter, the imports increased further, as the country loosened its Covid-era restriction policy.

The below table highlights the spike in Chines imports into India.

**PVC Resin Emulsion Grade**

Year	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Value in INR	3581.7	5651.3	1705.8	19828.1	16030.7
% Growth		57.8	-69.8	1062.4	-19.2
<b>Total Import of commodity (kgs)</b>	<b>61414.3</b>	<b>43970.6</b>	<b>33964.8</b>	<b>83648.1</b>	<b>79043.3</b>
% Growth		-28.4	-22.8	146.3	-5.5

**PVC Resin Suspension Grade**

Year	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Value in INR		14928.1	51254.9	276632.9	596881.2
% Growth			243.3	439.7	115.8
<b>Total Import of commodity (kgs)</b>		<b>707376.5</b>	<b>869080.4</b>	<b>1386548.3</b>	<b>1663637.0</b>
% Growth			22.9	59.5	20.0

**CPVC Resin**

Year	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Value in INR			4422.9	38839.2	103671.8
% Growth				778.2	166.9
<b>Total Import of commodity (kgs)</b>			<b>143016.5</b>	<b>222438.2</b>	<b>338088.5</b>
% Growth				55.5	52.0

**Other PVC items**

Year	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Value in INR		1605.7	3003.9	2481.4	5059.8
% Growth			87.1	-17.4	103.9
<b>Total Import of commodity (kgs)</b>		<b>15008.2</b>	<b>17706.5</b>	<b>17971.4</b>	<b>24553.0</b>
% Growth			18.0	1.5	36.6

(Source: China-Direct.Biz, Arihant Research)

## Key Management:

Personnel	Designation	Description
Mr. Vijay Shankar	Chairman	He is a Chartered Accountant and MBA from Kellogg School of Management. He is on the Boards of several companies like KCP Limited, Oriental Hotels Limited, Kaveri Retreats & Resorts Limited and Transport Corporation of India Limited. He has a Doctorate of Philosophy degree from the The School of Graduate Studies, Rutgers, The State University of New Jersey, and is a fellow of the Institute of Directors. He is a recipient of the Udyog Rattan Award presented by The Institute of Economic Studies. He was the president of Indian Chemical Council from 2018–2020 and currently serves as the vice president of the Tamil Nadu Tennis Association. He is an industrialist and has several years of experience in managing several businesses.
Mr. Ramkumar Shankar	Managing Director	He has been associated as the Managing Director of the Company since February 2021. He is also the managing director of CCVL since April 2020 and has been heading the chloro – vinyl business of our Company since 2013. He holds a bachelors’ degree in commerce from the University of Madras and has completed an accelerated management program from the Indian School of Business. He is also a qualified chartered accountant and a cost accountant. Presently, he is a member of the CII National Committee on Chemicals and Petrochemicals 2020–21, co – opted member of the general committee 2020 – 21 of the Madras Chamber and was a president of Alkali Manufacturers Association of India. He has several years of experience in the chloro-vinyls business.
Mr. N. Muralidharan	Chief Financial Officer	He is currently handling the role of CFO of the listed entity Chemplast Sanmar Limited and its subsidiary, He is associated with the Sanmar Group since 1991. Chemplast Cuddalore Vinyls Limited. He handled the successful IPO of Chemplast Sanmar Limited in August-21. He was earlier deputed overseas as CFO of an overseas company acquired by The Sanmar Group and handled the integration of the acquired unit. He has been actively involved in four acquisitions and have handled the integration of these acquired units. He was instrumental in raising debt / equity resources over USD 2 Billion, both for the overseas entity as well as for the Indian entities. With regards to his educational background, he is A.C.A., Finance and Accounting.
Mr. Aditya Jain	Independent Director	He has been associated as Director of our Company since April 2021. He holds a bachelors’ degree in mechanical engineering from Birla Institute of Technology, Ranchi University and masters’ degree in business administration from Henley - The Management College, Brunel University. He is registered with the Independent Directors’ Databank issued by the Indian Institute of Corporate Affairs. He is the chairman and editorial director of International Market Assessment India Private Limited, an economic and business research company, established in 1994.

## Risks and Concerns:

- Sales realization depends upon prices of the underlying chemicals. Decline in prices of PVC globally or locally, owing to increased imports can affect the sales realizations and overall revenue of the company.
- The company sources some of its raw materials from the international market. Increase in freight and logistic cost and price of underlying raw materials can negatively impact the operating margins of the company.

**Valuation:** Chemplast Sanmar's expansion in Specialty Chemicals and Custom Manufacturing commercializing in H2FY24 will reflect in revenue terms in FY25 and FY26. The revenue from the high margin Custom Manufacturing segment will almost triple from FY23 while the Specialty Paste PVC Resin segment revenue will also more than double between FY23 to FY26 on account of both volume increase as well as expected increase in PVC resin prices back to normalized levels historically. Hence, we are considering the contribution from Custom Manufacturing and Specialty Paste PVC Resin separately, and the other Non-Specialty Chemicals and Suspension PVC businesses in our SOTP valuation to arrive at a Target Price of INR 718 per share.

Sum of the Parts (INR Mn)	EV/EBITDA Multiple FY26E	EV
Custom Manufacturing	20	47,928
Specialty Chemicals	12	21,289
Suspension PVC	10	24,957
Other Non-Specialty Chemicals	8	4,210
Total EV		98,383
Net Debt		-15,204
Market Cap		1,13,588
Total Number of Equity Shares		158
Target Price		718

## Financials

Profit & Loss Statement (INR, Mn)	FY22	FY23	FY24E	FY25E	FY26E
<b>Revenues</b>	<b>58,920</b>	<b>49,411</b>	<b>43,774</b>	<b>56,259</b>	<b>65,100</b>
% Growth	55.1%	-16.1%	-11.4%	28.5%	15.7%
Employee Costs	1,201	1,472	1,611	1,953	2,240
Operating & Other Expenses	45,751	43,257	39,409	43,978	48,901
<b>EBITDA</b>	<b>11,968</b>	<b>4,681</b>	<b>2,754</b>	<b>10,327</b>	<b>13,958</b>
<b>EBITDA Margin %</b>	<b>20.3%</b>	<b>9.5%</b>	<b>6.3%</b>	<b>18.4%</b>	<b>21.4%</b>
Depreciation	1,370	1,420	1,728	1,812	1,861
Other Income	575	799	870	844	976
<b>EBIT</b>	<b>11,173</b>	<b>4,060</b>	<b>1,895</b>	<b>9,359</b>	<b>13,074</b>
Finance Cost	3,216	1,540	1,396	1,409	1,430
Exceptional Items	-	(805)	-	-	-
PBT	7,957	1,715	499	7,950	11,644
Income Tax	1,469	192	(183)	1,590	2,329
<b>PAT</b>	<b>6,488</b>	<b>1,524</b>	<b>682</b>	<b>6,360</b>	<b>9,315</b>
<b>PAT Margin %</b>	<b>11.0%</b>	<b>3.1%</b>	<b>1.6%</b>	<b>11.3%</b>	<b>14.3%</b>

Source: Company, Arianth Capital Research

Balance Sheet (INR, Mn)	FY22	FY23	FY24E	FY25E	FY26E
<b>ASSETS</b>					
Inventories	7,111	6,431	5,397	6,628	7,313
Trade Receivables	1,899	1,426	1,439	1,541	1,784
Cash & Bank Balance	12,292	11,919	2,861	12,392	24,852
Other Current Assets	1,309	1,680	1,680	1,680	1,680
Total Non-Current Assets	33,410	36,911	42,325	41,593	40,983
<b>Total Assets</b>	<b>56,021</b>	<b>58,368</b>	<b>53,702</b>	<b>63,834</b>	<b>76,611</b>
<b>EQUITY AND LIABILITIES</b>					
Equity Share Capital	791	791	791	791	791
Other Equity	16,260	17,794	18,476	24,836	34,151
<b>Net Worth</b>	<b>17,050</b>	<b>18,585</b>	<b>19,267</b>	<b>25,627</b>	<b>34,942</b>
Borrowings	8,815	10,192	9,308	9,507	9,647
Other Non-Current Liabilities	8,312	8,066	8,066	8,066	8,066
Trade Payables	19,284	18,615	14,152	17,725	21,046
Other Current Liabilities	2,560	2,910	2,910	2,910	2,910
<b>Total Equity &amp; Liabilities</b>	<b>56,021</b>	<b>58,368</b>	<b>53,702</b>	<b>63,834</b>	<b>76,611</b>

Source: Company, Arianth Capital Research

Cash Flow (INR, Mn)	FY22	FY23	FY24E	FY25E	FY26E
PBT	7,956	1,715	499	7,950	11,644
<b>Operating Profit before WC Changes</b>	<b>12,158</b>	<b>4,610</b>	<b>3,265</b>	<b>10,045</b>	<b>13,672</b>
Operating Profit after WC Changes	10,780	4,488	(177)	12,286	16,066
Tax Paid	(1,770)	(934)	183	(1,590)	(2,329)
<b>Cash Flow from Operating Activities</b>	<b>9,010</b>	<b>3,554</b>	<b>6</b>	<b>10,696</b>	<b>13,737</b>
<b>Cash Flow from Investing Activities</b>	<b>1,082</b>	<b>(2,172)</b>	<b>(6,272)</b>	<b>(236)</b>	<b>(273)</b>
<b>Cash Flow from Financing Activities</b>	<b>(3,129)</b>	<b>(270)</b>	<b>(2,792)</b>	<b>(929)</b>	<b>(1,004)</b>
Net Change in Cash & Cash Equivalents	6,963	1,112	(9,058)	9,531	12,460
Opening Cash & Cash Equivalents	3,035	9,998	11,110	2,052	11,582
<b>Closing Cash &amp; Cash Equivalents</b>	<b>9,998</b>	<b>11,110</b>	<b>2,052</b>	<b>11,582</b>	<b>24,042</b>

Source: Company, Arihant Capital Research

Key Ratios	FY22A	FY23A	FY24E	FY25E	FY26E
Per Share (INR)					
EPS	41.0	9.6	4.3	40.2	58.9
BVPS	107.8	117.5	121.8	162.1	221.0
Valuation (x)					
P/E	12.2	51.9	115.9	12.4	8.5
P/BV	4.6	4.3	4.1	3.1	2.3
EV/EBITDA	12.0	30.7	52.2	13.9	10.3
Return Ratios (%)					
Gross Margin	36.9%	35.0%	35.8%	45.6%	47.0%
EBITDA Margin	20.3%	9.5%	6.3%	18.4%	21.4%
PAT Margin	11.0%	3.1%	1.6%	11.3%	14.3%
NOPAT Margin	15.5%	7.3%	5.9%	13.3%	16.1%
ROE	95.7%	8.6%	3.6%	28.3%	30.8%
ROCE	44.4%	15.3%	6.8%	30.2%	33.7%
Leverage Ratio					
Total D/E	0.5	0.5	0.5	0.4	0.3
Turnover Ratios					
Asset Turnover	1.2	0.9	0.8	1.0	0.9
Receivable Days	12	11	12	10	10
Inventory Days	44	48	45	43	41
Payable Days	119	138	118	115	115

Source: Company, Arihant Capital Research

**Arihant Research Desk**Email: [research@arihantcapital.com](mailto:research@arihantcapital.com)

Tel. : 022-42254800

Head Office	Registered Office
#1011, Solitaire Corporate Park Building No. 10, 1 <sup>st</sup> Floor Andheri Ghatkopar Link Road Chakala, Andheri (E) Mumbai – 400093 Tel: (91-22) 42254800 Fax: (91-22) 42254880	Arihant House E-5 Ratlam Kothi Indore - 452003, (M.P.) Tel: (91-731) 3016100 Fax: (91-731) 3016199

Stock Rating Scale	Absolute Return
BUY	>20%
ACCUMULATE	12% to 20%
HOLD	5% to 12%
NEUTRAL	-5% to 5%
REDUCE	-5% to -12%
SELL	<-12%

Research Analyst Registration No.	Contact	Website	Email Id
INH000002764	SMS: 'Arihant' to 56677	<a href="http://www.arihantcapital.com">www.arihantcapital.com</a>	<a href="mailto:research@arihantcapital.com">research@arihantcapital.com</a>

**Disclaimer:** This document has been prepared by Arihant Capital Markets Ltd. This document does not constitute an offer or solicitation for the purchase and sale of any financial instrument by Arihant. This document has been prepared and issued on the basis of publicly available information, internally developed data and other sources believed to be reliable. Whilst meticulous care has been taken to ensure that the facts stated are accurate and opinions given are fair and reasonable, neither the analyst nor any employee of our company is in any way responsible for its contents and nor is its accuracy or completeness guaranteed. This document is prepared for assistance only and is not intended to be and must not alone be taken as the basis for an investment decision. The user assumes the entire risk of any use made of this information. Arihant may trade in investments, which are the subject of this document or in related investments and may have acted upon or used the information contained in this document or the research or the analysis on which it is based, before its publication. This is just a suggestion and Arihant will not be responsible for any profit or loss arising out of the decision taken by the reader of this document. Affiliates of Arihant may have issued other reports that are inconsistent with and reach different conclusion from the information presented in this report. No matter contained in this document may be reproduced or copied without the consent of the firm.

Arihant Capital Markets Ltd.  
1011, Solitaire Corporate park, Building No. 10, 1st Floor,  
Andheri Ghatkopar Link Road, Chakala, Andheri (E)  
Tel. 022-42254800 Fax. 022-42254880