# SUPREME PETROCHEM LTD.

# Summary

# Supreme Petrochem Ltd (SPL) is the India’s largest producer and exporter of polystyrene polymer (PS), compounds of styrenics etc.

# SPL has seen superlative earnings performance: Nearly 4 to 4.5x fold increase in net profits in FY21 – driven by favourable industry structure (closure of LG Polymers in May 2020), shortage of PS domestically, and strong international price delta (due to supply disruptions in global styrene and therefore polystyrene). Price delta is the spread between PS and raw material styrene etc.

# Future earnings performance will be driven by volumes; global price delta could soften as supply disruptions in US and Europe ease. Further China, a key player with 25% of global capacity is also adding PS capacities

# From 3rd March’22 there is strong PV action. From Rs 730 level stock went upto Rs 1000. From April 2020, till date, the stock has risen nearly 8-9x as covid correction coincided with the structural change witnessed in the sector with closure of LG Polymers

# Environmental risks and risk of government ban on PS for single use packaging remains.

### What is Polystyrene? By Product/End-Use Sector and Application

Polystyrene (PS) is one of the most widely used kinds of plastic. It is **a polymer made from the monomer styrene (derived from benzene and ethylene), a hydrocarbon compound**. It is a **thermoplastic polymer** ie melts if heated and becomes solid again when cooled, known for its versatility in high heat resistance, solid chemical strength, and notable rigidity that can be molded into objects or made into a foam and used as thermal insulation. More than one-third of PS is used as a packaging material, so the heat resistance characteristic of PS is essential for hot-filled methods of food packaging.

**A) By Product Type:** General-Purpose Polystyrene (GPPS), High-Impact Polystyrene (HIPS), Expandable Polystyrene (EPS), Extruded Polystyrene (XPS). GPPS and HIPS are the most commonly used PS resins for injection molding. **GPPS** is clear and brittle (e.g., compact disc cases, food packaging, disposable utensils, cutleries, and various other consumer durables), while **HIPS** is opaque and more durable (consumer electronics and toys).

*Expanded polystyrene (EPS)* is a rigid cellular plastic originally invented in Germany by BASF in 1950. EPS is 98% air and the rest is made from tiny, spherical EPS beads—themselves made only of carbon and hydrogen. EPS is among the largest commodity polymers produced in the world and is the second-largest styrene derivative, after polystyrene. It is a solid foam with a unique combination of characteristics, such as lightness, insulation properties, durability, and excellent processability. *EPS is used in many applications, such as thermal insulation board in buildings, packaging (including food), cold storage segment for vaccine handling, fish boxes etc*.

**B) By End-Use Industry**

Some of the key applications are Packaging Industry, Appliances and Consumer Electronics (EPS), Construction Industry (EPS and XPS are effective thermal insulators in buildings), Cold Chain Development (EPS), Toys, Gardening accessories, and Medical Equipment.

**Some key end-use segments**

*Consumer Electronics*

After crude, electronics is the second largest item imported in India. Govt’ Make in India initiative for this sector has resulted in Production-Linked Incentives (https://www.meity.gov.in/esdm/pli). This will create growth opportunities in the sector - Indian ACE (Appliances and Consumer Electronics) market is expected to double to Rs 1.48 lakh crore ($21.18 billion) by 2025 (from Rs 76,400 crore or $10.93 billion in 2019). China unequivocally dominates the Indian ACE sector, with yearly imports of 40-50% entirely built units and 70% components.

*Building Insulation/Construction Industry:* Globally EPS and XPS are the material of choice for insulating both commercial and residential buildings for energy conservation to reduce Co2 emissions.

**C) By Application:** HVAC Insulation, Rigid Packaging, Seating, Flexible Packaging

### Overview of Global Plastics

Global plastics market is estimated at 580 bn USD in 2020 and is projected to grow at a CAGR of 3.4% to 750 bn USD by 2028. India accounts for less than 6% of global demand. China is the [leading producer of plastics](https://www.statista.com/statistics/281126/global-plastics-production-share-of-various-countries-and-regions/), accounting for roughly 31 percent of global production. The key plastic resins are polyethylene (33%), polypropylene (32%), PVC, PET, and Polystyrene (made from polymerisation of monomer of styrene).

### Global demand – supply Polystyrene

Asia Pacific (especially China) is a key producer and consumer of polystyrene accounting for over 50% of total capacity and demand for PS. While developed markets have rationalised PS capacities through consolidation and closures by nearly 40%, China has been steadily expanding their PS capacities such that it accounts for more than 25% of global capacity in 2020 and over 90% of PS imports within Asia.

Key players globally are; SABIC, Total, LG Chem, BASF SE, Ineos Styrolution Group GmbH

**Covid Impact – Supply disruptions from US, Europe, Singapore and Saudi Arabia, partly driven by styrene shortages, hurricane Ida damages (August 2021, US) while OEM demand remained robust. This drove up PS prices and profitability:** In 2020, there were supply disruptions (predominantly in the raw material - styrene plants) in US and Europe which in turn impacted the RM supply while demand from Consumer appliance OEMs were very strong. This pushed margins of PS players upwards. Subsequently, in Asia supply was curtailed when two plants stopped PS manufacturing; Denka - Singapore and Saudi Polymers - Saudi Arabia, leading to a combined plant closure of 4,00,000 tonnes.

**Oct 2021:** *Supply yet fluctuating in US post hurricane Ida in August 2021:* USA has been witnessing a subdued supply of styrene and benzene feedstocks owing to the heavy damages incurred by hurricane Ida at the Louisiana petrochemical base in late August that led to the shutdown of several production facilities in the region

**Mar 2022:** Domestic Polystyrene prices surged with strong product futures and geopolitical tension between Russia and Ukraine.

US and Europe supply issues are expected to be resolved in 2022

Red flag: EU and US have banned polystyrene in some applications; eg US has banned PS in being used for packaging such as boxes, containers, and carry bags.

### Indian Scenario for Polystyrene: From surplus to shortage.. and back to surplus in FY23

**Capacity:** PS capacity (name plate capacity on standard grades) in India is 472,000 tonnes (pre LG Polymer incident). Effective capacity is lower at 75-80% given that non-standard grades are manufactured. There are three players, of which LG Polymers is no longer operational. Hence, operational capacity currently is 3,62,000 tonnes; and effective capacity is 75-80% or **2,71,500 tonnes**.

*LG Polymer (erstwhile Hindustan Polymers):* **The company is owned by LG Chem Ltd.** **of South Korea**, an affiliate of LG Corp. - the electronics-to-services giant.

**Demand and Imports:** Domestic demand in FY20 was **2,55,000 tonnes**. Hence, demand-supply is balanced post the closure of LG Polymers. Imports are indicatively 30-40,000 tonnes to take care of peak demand requirements (25,000 tonnes per month). Imports increased in FY21 to 40,000 tonnes after the LG Polymers incident, and are from Far East/South East Asia (Malaysia, Singapore, Chinese Taipei), Iran, UAE and USA.

**Exports:** Supreme Petrochem used to export 50,000 to 60,000 tonnes annually; however, this has reduced significantly in FY21, post the LG incident

**Margins:** This isdetermined by the delta between global PS and Styrene prices. Historically pre covid (average of last 5 years), delta for GPPS was USD 180-200/tonne and for HIPS was an additional USD 80-120/tonne. Currently, price delta for GPPS is USD 300/tonne, with incremental spread of USD 250/tonne for HIPS.

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*Note: Ineos Styrolution capacity is now 90,000 tonnes*

**Source:** [**https://www.statista.com/statistics/1167506/india-styrenics-production-capacity-by-company/**](https://www.statista.com/statistics/1167506/india-styrenics-production-capacity-by-company/)

### Supreme Petrochemicals: Business Overview

Market Cap: Rs **8500** Cr

Founded in 1995, Supreme Petrochem Ltd (SPL) is the India’s largest producer and exporter of polystyrene polymer (PS), compounds of styrenics etc. In India, in PS, **it has share of more than 50%** and the largest exporter, exporting to over 100 countries globally.

**Geographical Split: Exports shrunk in FY21 to cater to domestic demand**
Domestic - 93% in FY21 vs 84% in FY18
Export - 7% in FY21 vs 16% in FY18

[**Parent organization**](https://www.google.com/search?rlz=1C1CHBF_enIN912IN912&sxsrf=APq-WBskM-3FhWKV4ICLOY_dyRthjEUdqg:1648484243596&q=supreme+petrochem+parent+organization&stick=H4sIAAAAAAAAAOPgE-LSz9U3SC7MKUpL1zLIKLfST87PyUlNLsnMz9PPL0pPzMusSgRxiq0KEotS80oUkAUXsaoWlxYUpeamKhSklhTlJ2ek5ipgUQcAB6lF-2gAAAA&sa=X&ved=2ahUKEwiHloeumun2AhUaUGwGHV_2AlcQ6BMoAHoECBoQAg)**:**[Supreme Industries](https://www.google.com/search?rlz=1C1CHBF_enIN912IN912&sxsrf=APq-WBskM-3FhWKV4ICLOY_dyRthjEUdqg:1648484243596&q=Supreme+Industries&stick=H4sIAAAAAAAAAOPgE-LSz9U3SC7MKUpLVwKzU9LzKiqStAwyyq30k_NzclKTSzLz8_Tzi9IT8zKrEkGcYquCxKLUvBIFZMFFrELBpQVFqbmpCp55KaXFJUWZqcU7WBl3sTNxMAAAWuJPqWkAAAA&sa=X&ved=2ahUKEwiHloeumun2AhUaUGwGHV_2AlcQmxMoAXoECBoQAw) (M cap of Rs 25,000 cr)

SPL is promoted jointly by Supreme Industries Ltd., the country's largest plastic product company, and R. Raheja Group.

*SUPREME INDUSTRIES (Supreme):*

Supreme is the largest plastics processing company in India engaged in the manufacture of pipes and fittings and moulded products (Composite cylinders, furniture, crates, components for automobile and consumer durable industry), extruded products (mono, multilayer and cross laminated films, PE Foam, PP mats, etc.).

*RAJAN RAHEJA GROUP:*

Rajan Raheja Group has interests in automobile batteries, cement, ceramic tiles, readymix concrete, software, petrochem, publishing, cable television, retailing, hotels, asset management and real estate.

[**Subsidiaries**](https://www.google.com/search?rlz=1C1CHBF_enIN912IN912&sxsrf=APq-WBskM-3FhWKV4ICLOY_dyRthjEUdqg:1648484243596&q=supreme+petrochem+subsidiaries&stick=H4sIAAAAAAAAAOPgE-LSz9U3SC7MKUpL19LMKLfST87PyUlNLsnMz9PPL0pPzMusSgRxiq2KS5OKM1MyE4syU4sXscoVlxYUpeamKhSklhTlJ2ek5iogKwAA-yZpJVoAAAA&sa=X&ved=2ahUKEwiHloeumun2AhUaUGwGHV_2AlcQ6BMoAHoECBsQAg)**:**[SPL Industrial Park Ltd](https://www.google.com/search?rlz=1C1CHBF_enIN912IN912&sxsrf=APq-WBskM-3FhWKV4ICLOY_dyRthjEUdqg:1648484243596&q=SPL+Industrial+Park+Ltd&stick=H4sIAAAAAAAAAOPgE-LSz9U3SC7MKUpLV-LVT9c3NEwzMKiwyCsv0tLMKLfST87PyUlNLsnMz9PPL0pPzMusSgRxiq2KS5OKM1MyE4syU4sXsYoHB_goeOallBaXFGUm5igEJBZlK_iUpOxgZdzFzsTBCAD6rPvXagAAAA&sa=X&ved=2ahUKEwiHloeumun2AhUaUGwGHV_2AlcQmxMoAXoECBsQAw), [SPL Industrial Support Services Ltd](https://www.google.com/search?rlz=1C1CHBF_enIN912IN912&sxsrf=APq-WBskM-3FhWKV4ICLOY_dyRthjEUdqg:1648484243596&q=SPL+Industrial+Support+Services+Ltd&stick=H4sIAAAAAAAAAOPgE-LSz9U3SC7MKUpLV-LVT9c3NEyrNIzPNU1K0dLMKLfST87PyUlNLsnMz9PPL0pPzMusSgRxiq2KS5OKM1MyE4syU4sXsSoHB_goeOallBaXFGUm5igElxYU5BeVKASnFpVlJqcWK_iUpOxgZdzFzsTBCACw8IaGdgAAAA&sa=X&ved=2ahUKEwiHloeumun2AhUaUGwGHV_2AlcQmxMoAnoECBsQBA)

[**Number of employees**](https://www.google.com/search?rlz=1C1CHBF_enIN912IN912&sxsrf=APq-WBskM-3FhWKV4ICLOY_dyRthjEUdqg:1648484243596&q=supreme+petrochem+number+of+employees&sa=X&ved=2ahUKEwiHloeumun2AhUaUGwGHV_2AlcQ6BMoAHoECBcQAg)**:**350–400

**SPL** owns and operates state-of-the art production facilities from two locations in India, the first at Amdoshi – Wangani Village near Nagothane in District Raigad Maharashtra and the second in New Manali Town near Chennai in Tamil Nadu.

**Product Segments:** Polystyrene (PS), Expandable Polystyrene (EPS), Specialty Polymers and Compounds (SPC), Extruded Polystyrene Foam Boards (XPS), Styrene Methyl Methacrylate (SMMA)

**Plants:**
The Styrenics facility at Amdoshi – Wangani Manufactures

* Polystyrene (PS)
* Expandable Polystyrene (EPS)
* Specialty Polymers and Compounds (SPC)
* Extruded Polystyrene Foam Boards (XPS)
* Styrene Methyl Methacrylate (SMMA)

The infrastructure at the facility can handle upto a million tons of Polymers.

The New Manali Town facility manufactures Expandable Polystyrene (EPS)

It has an **installed capacity of Polystyrene - 2,70,000 tonnes; expandable polystyrene - 72,100 tonnes**

Value added/Special grade PS currently accounts for 1/3rd of SPL’s total revenues**. Focus is on increasing the share of Value added PS – towards EPS, specialty compounds and ABS:** This is because a) margins of EPS are higher than PS and b) Compounds business supplies to the fast growing electrical, electronic and appliance businesses c) ABS - engineering plastic, finds many applications and also enjoys better margins.

**Revenue breakup:** PS and EPS accounts for 68% of total revenues, 24% is styrene imports/trading on behalf of large consumers including paint companies, and remaining 8-10% is masterbatch compounds and Extruded Polystyrene.

**Raw materials:** Styrene, key RM, mainly imported from Gulf, Singapore and U.S.

*Styrene Monomer (SM) prices were largely stable during the H1FY21. China’s new SM capacity additions helped in moderating the price range in Asia. Two large world scale SM plants were commissioned in China in early 2020. A third SM plant with 6,30,000 tonnes capacity has been commissioned in 2021. Self-sufficiency for SM in China also will mean more stable pricing regime due to removal of volatility associated with China’s SM imports. (Source: AR – FY21)*

### Key Triggers for growth

**Production Shutdown of Competitor-** During FY21, LG Polymers India Ltd's, second largest polystyrene (PS) manufacturer in India had to shut down its facility post a styrene vapour leakage incident at its Vizag plant. This resulted in more than 30% volume growth for SPL on account of the diversion of the incremental volumes catered by LG Polymers (affiliate company of S. Korea’s L G Corp.) The other competitor is Ineos Styrolution.

Key drivers for PS are **Packaging, Appliances and Consumer Electronics and Construction**

*Appliances and Consumer Electronics – a driver:* In the short to medium term, consumer electronics can be a major driver of PS. Indian electronics market is expected to reach USD 400 billion by 2025, with India expected to become the fifth-largest globally.

*Construction Sector/Building Insulation a future driver* **-** International Energy Alliance (IEA) in their India Energy Outlook 2021 has predicted that more than half the increase in demand for energy in India will come from cooling load of dwellings in the period from 2019 to 2040 and have urged Government of India to give greater emphasis on building insulation to combat the same. This will necessitate the use of PS.

**Capex**
*FY21:* SPL incurred capex of Rs 26 crores related to PS (**Polystyrene)** and EPS (Expanded **Polystyrene)** at Amdoshi and Manali plants.

*FY22 end and mid FY23:*Expanding PS/EPS capacity by 1,20,000 tonnes (90,000 tonnes for PS and 30,000 tonnes for EPS) @ Rs 250 cr. Capex partly to be completed by March 2022 and rest by FY23.

*FY24/FY25:*SPL is setting up a **new Mass ABS plant** (Acrylonitrile-Butadiene-Styrene Terpolymer - **higher grade of engineering resin**, a thermoplastic product formed by combining three monomers: acrylonitrile, butadiene, and styrene) with a total investment of Rs 660 cr. ABS is widely used in automotive, medical devices, consumer electronics, due to superior performance attributes.

*ABS market size in India* is ~ 2,70,000 tonnes of which nearly 1,00,000 tonnes or upto 50% is imported. Some of the major players operating in the India ABS market are Bhansali Engineering Polymers, INEOS Styrolution, LG Chemical, Saudi Basic Industries Corporation (SABIC), Lotte Chemical Corporation, Toray Industries Incorporation, Chi Mei Corporation, Samsung SDI Chemical, Formosa Plastic Group, China National Petroleum Corporation, The Dow Chemical Company, JSR Corporation

Growth drivers are appliance segment, Automobiles as well as Electrical & Electronic segments.

### SPL Financial Metrics – Key remarks

Supreme Petrochem, earnings and cash flows sharply increased by nearly 4.5x in FY21. This is due to

1. closure of a competitor (gas leak in LG Polymers in May 2020) – styrene plant will be relocated to S. Korea, but polystyrene unit will need to be relocated in India, in a non-residential locality
2. ban on import of air conditioners with refrigerant
3. improved demand from appliance manufacturers

**Volumes:** In FY22, PS/ EPS volumes are expected to grow by around 16-18%. (In FY21, PS volumes grew by 15-18% while EPS volumes grew by 20%). Post SPL’ capex completion of PS/EPS in Q4FY22 and Q1FY23, capacity will increase by 40 to 50%, similar to the capacity unoperational under LG Polymers. Price delta likely to soften, incremental profits if any, will be driven by volumes arising from capex and longer term from ABS.

**OPMs (dependent on delta between FG prices and RM prices)**: OPMs have also sharply improved to over 20% in FY21 from 5% levels in FY20. OPMs have slightly moderated to 17% in Q3FY22. Future margins will depend on the margin spread between PS and Styrene prices. This will be a function of global demand-supply, especially supply resumption in US and Europe and when additional PS capacities of China come on-stream.

**ROCE:** Healthy ROCE of over 18% historically, which sharply increased to over 70% in FY21

### Capital Allocation Decisions - Wise

a) Capex: PS/EPS capacity will be expanded by 1,20,000 tonnes by mid 2022 @ Rs 260 cr and another capex of Rs 660 cr is earmarked towards mass ABS. Company aims a cash payback within 3 years when undertaking new projects

b) Buyback in Sep 2020: Utilised Rs 49 cr to buyback 2.5% of share capital. Has completed 3 buybacks so far, which has not been successful, hence considered reduction in share capital.

c) Dividends: Dividend yield of 1.5%; dividend payout of 30-50%

d) Reduction in share capital: Equity share capital will be reduced to Rs 37.6 cr from Rs 94 cr by reducing the face value of the share from Rs 10 to Rs 4 and the shareholders will receive the money.

### Anti Thesis/Key Risk

* Polystyrene prices are dependent on international demand-supply which in turn is dependent on China’s role as a consumer and producer. China is in the process of setting up several styrene and PS plants, which can result in oversupply and dampen international PS prices. PS prices are also highly susceptible to prices of its key feedstock Styrene monomer.
* Environmental Risk i.e any type of leakage which may lead to plant shutdown.
* Government policy: The government has banned the manufacture, sale and use of identified single-use plastic items like plates, cups, straws, trays, and polystyrene from Jul 1, 2022. A ban on single-use cutleries in several states such as Sikkim, Maharashtra, Kolkata, etc. is likely to hamper the demand for General-Purpose Polystyrene in the years to come. Single-use plastic products (SUPs) are **used once, or for a short period of time, before being thrown away**. This has drastic impact on the environment as these plastics are less likely to be recycled
* Export market can be curtailed - Currently, there is a progressive ban on single use plastics (including products using polystyrene) across North America and Europe.