1. P.No.5: BPCL already has hygiene grade SAP. Process is not established yet for commercial scale ?

*The technology to produce Super Absorbent Polymers of the hygiene grade has been developed by BPCL R&D (SAP). This process is in-house developed and patented by BPCL R&D. Acrylic Acid, which is generated at Kochi Refinery's new Propylene Derivatives Petrochemical Complex, is used to make SAP. Technology, a piping and instrumentation diagram, a detailed engineering plan, and an equipment specification were all internally developed by the Kochi Refinery team and the Corporate Research & Development Center (CRDC). No external agency participated in this project. BPCL is yet to commercialize this process, and as of now the company has only set up a demonstration plant of 200 MT.*

***BPCL has established and patented the process but is yet to be commercialized.***

1. Do they produce agriculture-oriented grades also? (Potassium PA)

*Agriculture oriented grade of super absorbent polymer is not being produced by BPCL currently. The company has patented only hygiene super absorbent polymer as of now.*

1. Major consumption is in sanitary napkins & baby napkins which are growing at 14 – 14.7%. SAP CAGR is more than that (15.4% in P.No.12). Any particular factor accelerating this?

*The adoption of super absorbent polymer (SAP) in the diaper manufacturing industry has been lately introduced, which makes it as the replacement of other traditionally used materials like cotton, bleached cotton, and other non-woven fabrics. Therefore, the adoption or replacement rate signifies the actual growth of SAP in the particular end use sector, not the sector’s individual growth.*

*Moreover, major consumption of super absorbent polymer is in personal care end use segment which includes sanitary napkins, baby napkins and many more, boosting the products’ market at a CAGR of 15.5% till FY2030. However, there are other end use sectors like healthcare, agriculture & horticulture etc., where the consumption of super absorbent polymer has been realized, accelerating the consumption.*

*The consumption of super absorbent polymer in Agriculture & Horticulture sector is anticipated to be growing with the highest CAGR of 17.8% from FY 2022 to FY 2030, where it is widely used as containers for water and plant nutrients, especially in arid and semiarid regions, one of the key factors for acceleration in the consumption. Moreover, the consumption in healthcare sector is expected to be growing at a CAGR of 14.4% from FY 2022 to FY 2030, surging the market consumption.*

*Therefore, on using weighted average method, the cumulative CAGR comes out to be 15.4% considering the end use sectors growth in the coming years.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **India Superabsorbent Polymer Market, By End-Use Sectors, By Volume** **(Metric Tons)** | | | | | |
| **End-Use Sectors** | **FY2018** | **FY2022** | **FY2025** | **FY2030** | **CAGR 2022-2030** |
| **Personal Care** | 8,549 | 34,488 | 52,267 | 1,09,232 | 15.5% |
| **Healthcare** | 543 | 2,105 | 3,104 | 6,191 | 14.4% |
| **Agriculture & Horticulture** | 200 | 880 | 1,414 | 3,253 | 17.8% |
| **Others** | 228 | 804 | 1,094 | 1,822 | 10.8% |
| ***Total*** | ***9,521*** | ***38,278*** | ***57,878*** | ***1,20,499*** | ***15.4%*** |

1. The market data is probably for organised sector. Is there un-organized sector playing any important role. This might have a bearing on volume and prices.

*Yes, the market data is for the organized sector, as the setting up of a plant is capital-intensive and requires detailed technical know-how. Currently, no unorganized sector manufacturers are operating in the market, therefore not impacting the volume and prices.*

1. Price of SAP in 2022 (To be clarified)
   1. P.No.41 SAP/CIF is Rs. 115.76   (Import prices ?)- *Yes, CIF prices are* *Import Prices*
   2. P.No.39 SAP/FOB is Rs. 185.70 (Export Price ?)- *Yes, FOB prices are Export Prices*
   3. Domestic sale price ?
2. The capex proposed is 450 – 550 crs. Annual revenue would be around 600 crs and opex would be 450-500 crs. Considering Interest and Tax outgo, it seems Net Profit would be max 30 crores. In that case, the Project would have a Payback of more than 10 years. How come the Project is viable then.

*As per the initial findings based on expert interviews and industry norms, considering the proposed capex and opex, the gross margin would be around 20% of the operating revenue. Therefore, calculating the Payback period on the gross margin as per the industry practices, the project would have a payback of 5 years, resulting in the project's feasibility.*

*However, On realizing the interest, tax, and depreciation outgo, the net profit would be leaning maximum to 30 crores. In this case, the project would have a Payback of more than 10 years, questioning the viability of the project.*