

India's Electronic-Grade Chemicals and Process Materials 2026–2035

Market Size, Growth Drivers, Policy Impact
and Competitive Landscape



Semiconductor
Expansion



Chemical
Demand Growth



Policy Support



Investment
Opportunities

Industrial Market Intelligence

Edition 2.1

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India's Electronic-Grade Chemicals and Process Materials 2026-2035

Market size, import dependence and entry options for Indian suppliers to semiconductor, packaging and solar plants Recurring demand USD 264 million by 2035 (base)

| Solar 63%, packaging 19%, fabs 18% | Fab demand from 2028

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India's Electronic-Grade Chemicals and Process Materials, 2026-2035

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Important notice

This report is industrial research. It is not investment, legal or financial advice, and nothing in it is a recommendation to buy or sell any security. Future-year figures are modelled estimates built on stated assumptions, which are documented in the companion workbook. Company assessments rely only on public disclosures available at the research cut-off; a company may have capabilities it has not disclosed. Readers should verify material facts independently before acting on them. Market-research figures are cited for context and labelled [MR], with one exception: the global photoresist market used to derive fab resist intensity (Section 5.1). All rupee conversions use Rs 95 per US dollar.

Verification labels used throughout: [V] two or more independent sources; [V1] one primary source; [V1-S] one secondary source; [MR] commercial market research; [M] modelled. Source keys (N01-N66) refer to Appendix E.

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Executive decision dashboard

India will buy about USD 86 million of electronic-grade process chemicals, gases and related consumables in 2026. On the base case that rises to USD 196 million in 2030 and USD 264 million in 2035; the three scenarios span USD 154-396 million in 2035 [M]. Solar cell lines, not wafer fabs, buy most of it. The commercially credible entry points for Indian producers are therefore solar-grade and packaging-grade chemistry, which can later be upgraded towards fab grade. Fab demand itself starts only when Tata-PSMC's Dholera fab begins volume production in 2028 [V; N17, N32]. Figure 1 shows the three scenario paths.

Table 1. Decision dashboard

Question	Finding	Evidence
How large is the market?	USD 86 m (2026), 196 m (2030), 264 m (2035, base). Scenario range 2035: USD 154-396 m. Input-intensity envelope around the base: USD 181-381 m.	[M] Chapter 5
Who buys it?	2035 base: solar cell lines 63%, packaging plants (OSAT/ATMP) 19%, wafer fabs 18%.	[M] Chapter 5
How import-dependent is it?	57% of 2026 demand is imported, falling to 45% by 2035 on the base case (33% accelerated; 57% constrained). Excluding on-site bulk gases (USD 34 m in 2035), 52%. Counting only molecules made in India, 62%.	[M] Chapter 8
When does fab demand start?	Dholera: first wafer and commercial operations in 2028, starting at 55/90nm. The earlier December-2026 target dates from March 2024.	[V] N17, N32, N33
What does policy offer?	Semicon 2.0 (Rs 1,27,500 crore, approved 15 July 2026) makes materials, chemicals and gases eligible for 30% capital support. No support for customer-qualification costs was identified.	[V] N18, N30, N66
Where can Indian firms enter first?	HF/DHF/BOE upgrade (USD 18 m contestable in 2035); specialty-gas filling (30 m); packaging-plant consumables (18 m); licensed solar texturing (12 m). A Dholera acid bundle (9 m contestable) works only as an add-on line.	[M] on [V] evidence, Chapter 7
What is already localising?	Bulk ultra-high-purity gases (USD 34 m of 2035 demand, supplied by incumbents on site): Linde India is building an air-separation unit for the Tata fab (ready 2H 2027); INOX Air Products is planning a Dholera specialty-gas hub. Tanfac solar-grade DHF is in commercial supply.	[V1-S] N28, N29; [V] N15, N26
What should not be chased?	Photoresists (USD 9 m in 2035), CMP slurries (4 m) and ALD/CVD precursors (2 m): license or monitor rather than build.	[M] Chapter 6
What could change the answer?	Slower solar growth (-69 m of 2035 demand); weak policy execution (-33 m of 2035 domestic supply); solar capacity and solar chemical intensity (the largest single swings).	[M] Chapter 11
What must be decided in 12-24 months?	Make qualification costs fundable; begin Dholera sampling before 2028; create one certified packaging and trace-analytics capability; ask new approvals for supplier-localisation plans; create electronic-grade tariff lines.	Recommendation, Chapter 12

Labels: [V] two or more independent sources; [V1] one primary source; [V1-S] one secondary source; [M] modelled. USD at Rs 95/USD. Source keys refer to Appendix E.

1. Executive summary

This report asks a narrow question with large consequences: can Indian producers supply the chemicals, gases and process materials that India's new semiconductor and solar plants consume, and if so, which ones, for whom, and when? Our answer is that a commercially real market exists but it is smaller, later and more solar-led than the public conversation assumes. The most surprising finding is the mix: in 2035 India's wafer fabs account for fewer than one dollar in five of this demand, while solar cell lines account for more than half [M].

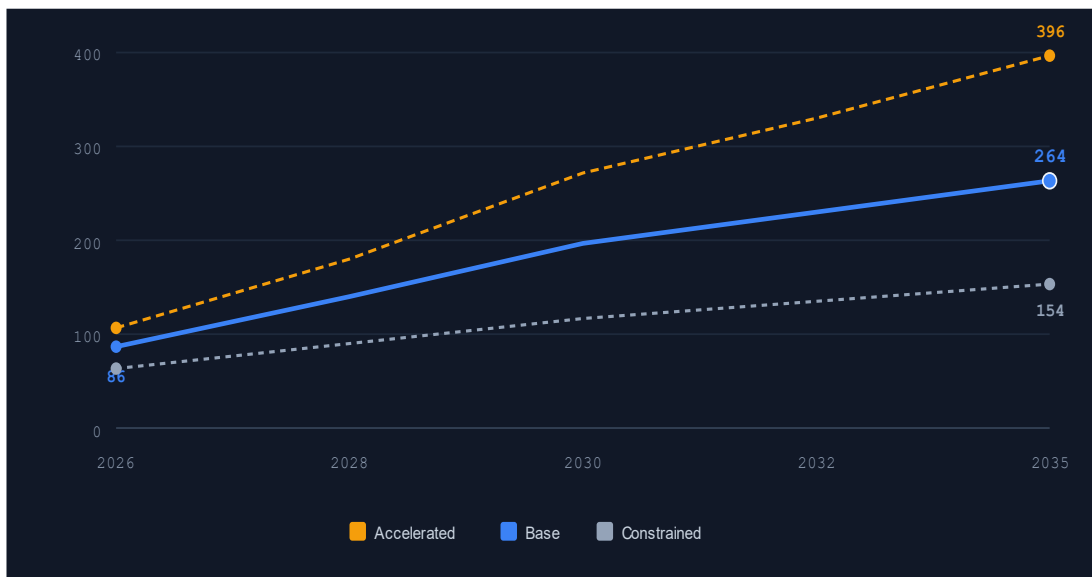


Figure 1. India's recurring demand for electronic-grade process consumables, three scenarios, 2026-2035 (USD million)
Modelled. Source: Techadyant Labs model v2.6, Outputs sheet.

The market. We estimate recurring demand at USD 86 million in 2026, USD 196 million in 2030 and USD 264 million in 2035 on the base case, a compound growth rate of about 13% a year [M]. A constrained case gives USD 154 million in 2035 and an accelerated case USD 396 million. These figures replace the previous edition's USD 780 million base case, which depended on a balancing item of USD 258 million with no underlying driver and on category ranges that did not add up to the total. Chapter 5 sets out the reconciliation line by line.

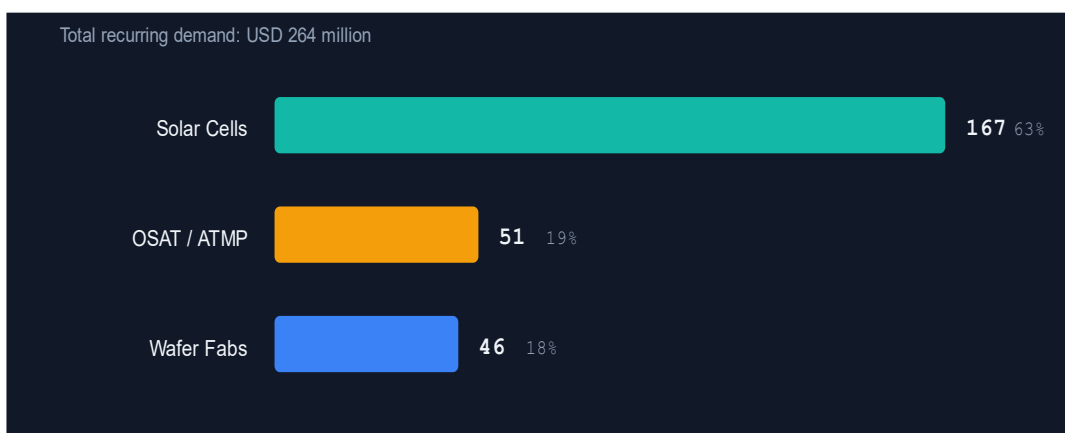


Figure 2. Who buys what: 2035 base-case demand by end-use
Modelled. Source: Techadyant Labs model v2.6, Outputs sheet (end-use split of the 2035 base case).

Who buys. Solar cell lines buy USD 167 million in 2035 (63% of the base case), mostly hydrofluoric acid, texturing chemistry and deposition gases. Packaging plants (OSAT/ATMP) buy USD 51 million (19%). Wafer fabs buy USD 46 million (18%): Dholera at volume, plus small silicon-carbide and gallium-nitride units [M]. Wet chemicals and gases together are 88% of the pool.

Timing. The first front-end fab will not run at volume before 2028: the Electronics and IT Minister said in July and September 2026 that Dholera would begin commercial operations in mid-2028 and produce its first wafer that year [V; N17, N32]. The window in which a new fab evaluates suppliers is therefore roughly 2028-2030, not 2027-2029. The HCL-Foxconn unit at Jewar, described in earlier work as a display-driver fab, is a packaging unit that processes wafers; the government counts it among the nine approved packaging units [V; N18, N20].

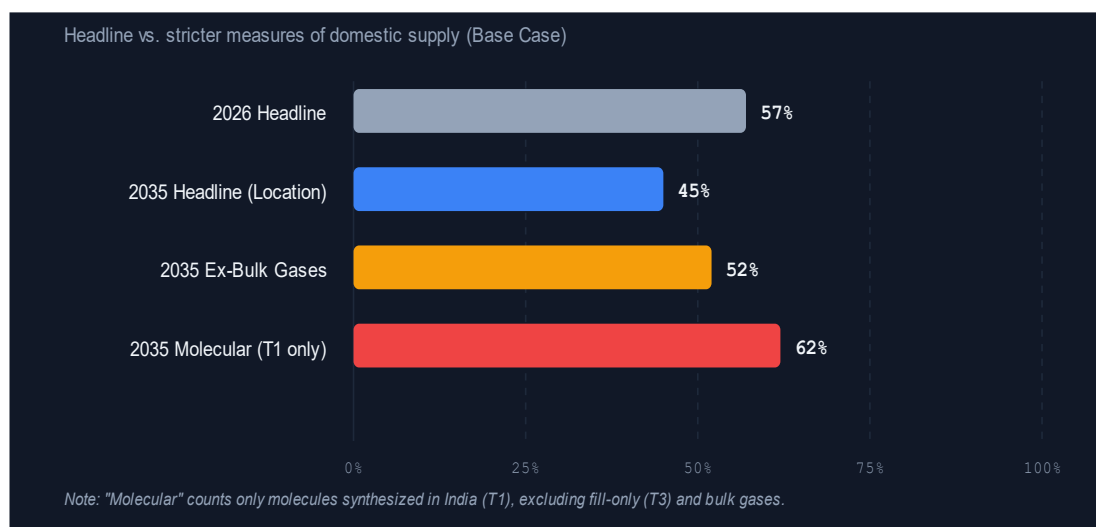


Figure 3. The localisation nuance: import dependence under four definitions

Modelled. Source: Techadyant Labs model v2.6, Outputs sheet (import dependence) and Calc_Base allocation matrix (variants).

Import dependence. About 57% of 2026 demand is imported [M]. That is lower than the previous edition's 85% because two kinds of supply are already domestic: Tanfac's solar-grade dilute hydrofluoric acid, sold under two contracts worth about Rs 1,068 crore to FY2028-29 [V; N15, N26], and bulk gases produced in India by Linde India and INOX Air Products. On the base case import dependence falls to 45% by 2035, and domestic supply grows from USD 37 million to USD 145 million [M]. Those figures count where the last production step happens. About USD 34 million of the 2035 domestic supply is bulk gas made on site by incumbents, and USD 14 million is local filling or blending of imported finished products. Excluding bulk gases, import dependence in 2035 is 52%; counting only molecules made in India, it is 62% (Chapter 8).

Where Indian firms can win. The most plausible entries are products where Indian producers already make the molecule and where the first customer is a solar or packaging plant rather than a fab: HF, DHF and buffered oxide etch; solar texturing chemistry; packaging-plant cleaners, fluxes and plating chemistry; and high-purity sulphuric acid, hydrogen peroxide and related acids supplied together to Dholera. Photoresists, CMP slurries and deposition precursors are strategically sensitive but small: together under USD 20 million in 2035 on the base case. Licensed local filling is the realistic route for them [M].

What stands in the way. The barrier is customer qualification and the infrastructure that supports it - certified packaging, validated trace-metal analytics and audited chains of custody - more than plant capital. Semicon 2.0 now funds capital spending on materials, chemicals and gases at 30% [V; N30], but

we found no instrument that pays for sampling, audits and split-lot trials. That gap is the main design fix we recommend.

Confidence. The demand model is transparent but rests on intensity assumptions - spend per wafer, per gigawatt and per packaged unit - that India does not publish. Holding everything else at base, moving those intensities to their bounds gives a 2035 range of USD 181-381 million. The 2035 solar build-out, solar wet-chemical use per gigawatt and packaging-plant consumption per unit move the answer most; the Dholera ramp moves it less than commonly assumed. Chapter 14 lists what we could not establish and how a decision-maker could find out.

Table 2. Headline findings and their evidence status

Finding	Value	Label
Recurring demand, 2035 (constrained / base / accelerated)	USD 154 / 264 / 396 m	[M]
Share of 2035 base demand bought by solar / OSAT / fabs	63% / 19% / 18%	[M]
Import dependence, 2026 and 2035 base	57% -> 45%	[M]
Domestic supplier opportunity, 2035 base	USD 145 m	[M]
ISM-approved semiconductor units	12 units, >Rs 1.64 lakh crore, plus one SPECS unit	[V] N18, N19, N25
Semicon 2.0 outlay and approval	Rs 1,27,500 crore; 15 July 2026	[V] N18, N31
Dholera first wafer / commercial operations	2028 (mid-2028)	[V] N17, N32
Dholera design capacity	50,000 wafers/month, Rs 91,000 crore	[V] N05, N06
India's only disclosed electronic-adjacent recurring process chemical in commercial supply	Tanfac solar-grade DHF, 10,000 TPA (AHF basis)	[V] N15, N26, N38
Import dependence 2035 base: location / excluding bulk gases / molecular	45% / 52% / 62%	[M]
Solar cell capacity, June 2026	36.6 GW (module capacity 261.7 GW)	[V1-S] N13

USD at Rs 95/USD (19 October 2026 close, N12).