

— FREE VENDOR SCREENING TOOL

THE FAB-GRADE VENDOR QUALIFICATION CHECKLIST

12 questions that separate a real high-purity/process-safety vendor from a catalog reseller — before you find out the hard way, 6 months into a build.

For use by: facilities engineers, process engineers, process safety engineers, and procurement teams evaluating piping, chemical-handling, and fluid-system vendors for high-purity or semiconductor-adjacent applications.

WHAT THIS CHECKLIST COVERS

SEMI F57/F41 test & qualification data · ISO 14644-1 cleanroom proof · ISO 9001 certification & CAPA process · HAZOP/HAZID/SIL/DHA-ready material data · RFI/RFP/RFQ discipline · lot traceability & audit access · a simple 3-tier self-score.

— THE CHECKLIST

12 QUESTIONS, 5 MINUTES,
ONE REAL ANSWER PER LINE

01

HOW TO USE THIS

Each question maps to a real industry standard: SEMI F57/F41 (extraction and system-qualification testing for high-purity materials), ISO 14644-1 (cleanroom classification), ISO 9001 (quality management certification), HAZOP/HAZID/SIL/DHA (the hazard-analysis methods a process-safety team runs), and CAPA (corrective and preventive action). If you don't work with these day to day, you don't need to memorize them — you just need to know a real high-purity/process-safety vendor can produce documentation against every one, and a catalog reseller can't. **Score "yes" only when they hand you the actual document** — not when they say "yes, we do that."

PURITY & CERTIFICATION

- 1 ☐ Do they have **SEMI F57** extraction test data for every wetted polymer component — and, if they're scoping the whole distribution system, **SEMI F41** qualification data too?
- 2 ☐ Can they give you their product's contamination contribution in **ppb/ppt** — real analytical numbers — or just "very clean"?
- 3 ☐ Can they name **one real semiconductor or high-purity customer** — not "many customers in the industry"?
- 4 ☐ Is their fabrication facility **ISO 14644-1** classified (ISO Class X), and can they prove it?
- 9 ☐ Do they hold current **ISO 9001** certification — with a real accreditation mark — and can they produce the certificate?

SAFETY & QUALITY DOCUMENTATION

- 5 ☐ Can they supply the reactivity, compatibility, and dust-characteristic data your **HAZOP/HAZID/DHA** team actually needs (plus SIL capability data, for any actuated/instrumented components) — not just an MSDS?
- 10 ☐ Can they trace material back to the raw material/resin **lot** — not just a batch number on an invoice?
- 11 ☐ Will they grant **on-site audit access** to their manufacturing/cleanroom facility — not just send a questionnaire?
- 12 ☐ Do they have a documented **CAPA** (corrective and preventive action) process for non-conformances, and will they show you a real example?

COMMERCIAL & ENGAGEMENT DISCIPLINE

- 6 ☐ Will they run a documented **RFI/RFP/RFQ** process with agreed commercial terms — or is it relationship-selling only?
- 7 ☐ Do they commit to a specific **lead time and warranty** on critical wetted components (pumps, membranes, seals) — or just "industry standard"?
- 8 ☐ Will they engage at the **design phase**, engineered in — or only show up after commissioning, as a retrofit?

— YOUR SCORE

9–12 Yes

Shortlist-Ready. Real documentation, references, and process discipline. Move to RFQ.

5–8 Yes

Needs More Documentation. Some real capability — request the missing items in writing before committing.

0–4 Yes

Red Flag. A pattern of "trust us" instead of documentation. Treat as high-risk regardless of price.

Hard gate: if 2 or more of Questions 1, 5, or 9 are "no," cap the tier at "Needs More Documentation" regardless of total score — a vendor can't talk their way to shortlist-ready on soft answers alone.

IF IT'S USEFUL

WANT TO SEE WHO ALREADY SCORES **FULL MARKS?**

Most vendor conversations start with claims, not documents. If you'd rather skip the legwork of chasing this data down yourself: LibertyCES represents three manufacturers who already score full marks against these same 12 questions, each with real named references and certifications we can pull documentation for.

- ✓ **Asahi/America** — Class 1000 (ISO 6) cleanroom-fabricated PVDF piping, named references at Intel, Micron, and NEC
- ✓ **GF Piping Systems** — Intel's 2023 EPIC Distinguished Supplier Award, TSMC's 2022 Excellent Performance Award, named customers ASE Co. Ltd. and ams-OSRAM
- ✓ **Pexco/Altaflo** — SEMI F-57/C-90 certified UHP PFA tubing, already sold into a real semiconductor account

SEND US

The category you're evaluating (piping, tubing, valves, filtration, chemical delivery) and we'll pull the relevant cert data — SEMI/ISO documentation, references, and specs — for the manufacturers above.

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