

PPE Total Cost of Ownership Comparison Tool

Heavy Industry Safety & FR Workwear Solutions — Lantaowork.com

Purpose

Purchase price is a fraction of true PPE cost. This 3-year TCO model factors in rush fees, quality rejects, administrative overhead, compliance gap exposure, and replacement frequency — enabling an accurate comparison of multi-supplier vs single-supplier heavy industry PPE programs.

3-Year TCO Comparison Worksheet

Assumptions: 500-worker program. FR coveralls, hi-vis vests, anti-static workwear. 3 garments per worker per year baseline.

COST CATEGORY	MULTI-SUPPLIER (4 VENDORS)	SINGLE-SUPPLIER FACTORY-DIRECT
Purchase Price (per garment)	\$85 avg across vendors	\$55-70 factory-direct
Annual Garment Volume	1,500 units	1,500 units
Annual Purchase Cost	\$127,500	\$82,500 — \$105,000
Expedited / Rush Order Fees	\$8,000 — \$15,000/year (emergency reorders from 4 vendors, unpredictable lead times)	\$0 — \$3,000/year (48-hr mill backup activation, no rush surcharge within protocol)
Quality Reject Costs	\$5,000 — \$10,000/year (inconsistent QC across vendors, 3-5% reject rate)	\$1,000 — \$2,500/year (triple-stage QC, ≤1.5% defect rate)
Compliance Gap Penalties & Fines	\$0 — \$50,000+/year (audit findings, expired certs, one incident = \$200K-\$2M+)	\$0 (proactive cert tracking, 90-day alerts, batch documentation)
Administrative Overhead	\$15,000 — \$25,000/year (manage 4 vendor relationships, 4 sets of paperwork, 4 invoices, 4 compliance files)	\$3,000 — \$5,000/year (one account manager, one invoice, one compliance file)
Replacement Due to Premature Wear	\$10,000 — \$18,000/year (inconsistent fabric quality, early tape delamination, seam failures)	\$3,000 — \$6,000/year (100+ cycle validated, 3M Scotchlite, consistent fabric)
Insurance Premium Impact	Baseline or +5-15% (history of incidents/compliance gaps)	Potential reduction with documented compliant program

3-Year Cumulative Comparison

SCENARIO	YEAR 1	YEAR 2	YEAR 3	3-YEAR TOTAL
Multi-Supplier (Low Estimate)	\$165,500	\$165,500	\$165,500	\$496,500

Multi-Supplier (High Estimate)	\$235,500	\$235,500	\$235,500	\$706,500
Single-Supplier Factory-Direct (Low)	\$89,500	\$89,500	\$89,500	\$268,500
Single-Supplier Factory-Direct (High)	\$121,500	\$121,500	\$121,500	\$364,500

\$138K–342K

3-YEAR TCO SAVINGS

28–48%

TCO REDUCTION

≥ 50x

ROI VS SINGLE INCIDENT

Hidden Costs Checklist — What Purchase Price Doesn't Show

- ☐ **Rush Fees:** When Vendor A can't deliver on time, what's the expedited shipping surcharge? With 4 vendors, this happens more often.
- ☐ **Quality Rejects:** Who pays for rejected batches? What's the replacement lead time? Workers without PPE = production stoppage.
- ☐ **Admin Time:** Procurement team hours spent managing 4 vendor relationships, 4 sets of invoices, 4 compliance files.
- ☐ **Compliance Exposure:** Cost of an audit finding. Cost of an OSHA citation. Cost of an incident where FR certificate can't be verified. These costs dwarf purchase price.
- ☐ **Insurance Premiums:** A history of incidents or compliance gaps leads to higher premiums. A documented, single-supplier compliant program can support lower rates.
- ☐ **Worker Non-Compliance:** If workers refuse to wear heavy, uncomfortable PPE, what's the cost of the resulting incident? What's the cost of replacing 40% more garments because they're not being worn?

How to Use This Tool

1. **Gather your current invoices** — all PPE suppliers, past 12 months. Include rush orders and rejected batches.
2. **Enter your actual purchase prices** in the worksheet above. Replace the example numbers with your real data.
3. **Estimate hidden costs** — admin hours, rush fees, quality rejects. If you don't track these, start. They're likely 15-30% of purchase cost.
4. **Request factory-direct pricing** from LantaoWork for your actual garment specs and volumes. We'll run the comparison using your numbers.
5. **Compare 3-year TCO** — not unit price. The supplier with the lowest unit price often has the highest total cost.

Note: All cost estimates are illustrative ranges based on industry benchmarks and client program data. Your actual costs depend on current supplier mix, volume, garment complexity, and hazard profile. Request a side-by-side comparison using your actual invoices — no commitment, just numbers.