SPRAYWERX TECHNOLOGIES

MARKET BRIEFING

THE 2026 POWDER ECONOMICS BRIEFING

What happened to thermal spray powder prices, the benchmark numbers to hold against your next quote, and the three levers that reduce cost-per-part — every figure dated and sourced. No forms, no gate.

SPRAYWERX TECHNOLOGIES INC.

North Vancouver, BC, Canada · spraywerx.com

AUGUST 2026

SUMMARY

Four facts that will show up in your next quote

01 Western WC powder is running roughly 3–4× the 2024 era (~$80–110/kg) — approximate, dated August 2026, on APT tungsten feedstock up ~6× year over year; cobalt has tripled. Our coated-part costs are exposed whether we coat in-house or buy coated.

02 This is policy-driven (China export licensing on ~79% of mine supply), not a spot blip: Western buyers now pay 2–3x China's domestic price. It could persist for years.

03 Suppliers are passing it through: NOV reports carbide costs +~400%; Kennametal guided to ~35% surcharge recovery for its then-current quarter (May 2026 call). Our quotes will reprice if they haven't.

04 Three responses exist: re-spec parts whose wear mode doesn't need tungsten; demand deposition-efficiency data from coaters (waste now costs $200+/deposited kg); start requalification data now — cycles run 12–24 months against 2027 deadlines.

RECOMMENDED ACTION

A wear-mode review of our coated-part specs this quarter, and the seven supplier questions on the last page at our next coating-supplier review.

3–4×
Western WC powder vs the 2024 $80–110/kg era (approx., Aug 2026)

3x
cobalt binder cost versus early 2025

45–70%
spread: 45–55% published norm to 70% Spraywerx measured (data on request) — ~$425/part at 2026 prices

The benchmark table — hold this against your next quote

Use these as reference points when a surcharge letter or re-quote arrives. All figures are dated; anything a supplier quotes you should be explainable against them.

INPUT	BASELINE (MID-2025 / 2024)	CURRENT (AS DATED)	WHAT TO ASK IF YOUR QUOTE MOVED MORE
Tungsten APT — export benchmark	$390–410/mtu (Jun 2025, FOB China)	$2,600–3,250 FOB China (Jun 24); European quotes $3,000–3,265/mtu (late Jul 2026)	“Which index is this tied to — and does the surcharge fall when the index falls?”
Tungsten APT — Chinese domestic	similar to export (pre-controls)	~$1,200–1,300/mtu equivalent (late Jul 2026) — a 2–3x gap below export	“What origin is the powder in my parts — and who captures the two-tier spread?”
WC powder (Europe)	roughly $80–110/kg finished-powder era	European WC powder, $292–300 per kg OF TUNGSTEN CONTENT, Mar 2026 print, single source (Meetyou).	“Quote me the same chemistry from a second origin.”
Cobalt (binder, 6–17 wt%)	~$21,000/t floor (early 2025)	~$56,000–58,000/t (Jul 2026)	“What binder fraction is my grade — and is the binder priced separately?”
Chromium / nickel (CrC & Ni-alloy inputs)	—	chromium +10–13% over the cycle; nickel modestly up y/y	“What would this part cost in Cr3C2-NiCr or an Fe-based chemistry?”

Table sources: Fastmarkets (Jun 2026); CTIA (Jul 2026); trade-press WC prints (Mar 2026); CME/Benchmark cobalt reporting; USGS MCS 2026. Baselines are era-representative, marked where approximate.

What happened, in four paragraphs

TUNGSTEN

On February 4, 2025, China — ~79% of world mine output — placed tungsten under dual-use export licensing, and has kept it there through every subsequent negotiation. APT export benchmarks — tungsten feedstock, not powder — went from ~$400/mtu (mid-2025) to over $3,000 (mid-2026), roughly 6×; finished Western WC powder moved less, roughly 3–4× the 2024 era (~$80–110/kg) — approximate, dated August 2026. The structural fact that matters: China's domestic price has fallen back (~57% off its March peak) while export prices hold — a two-tier market in which Western buyers pay 2–3x for the same molecule. That premium is made by policy, not geology; it could deflate, and it could persist. Price certainty in either direction is a mistake; pricing in supply concentration is not.

COBALT

The DRC (~three-quarters of world supply) replaced its export ban with hard quotas (96,600 t/yr through 2027) and enforced them — unused H1-2026 allocations were seized into a state reserve on June 30. The binder in your WC-Co powder costs roughly triple early-2025 levels.

TARIFFS — THE HONEST PICTURE

Most 2026 tariff commentary ages in weeks. As of this writing: the Supreme Court invalidated the IEEPA tariff layers (Feb 2026); the Section 122 10% global surcharge lapsed July 24, 2026; and the successor tariffs that began the same day explicitly exclude tungsten carbide powder and APT — HTS 2849.90.30 was excluded from the July 24, 2026 Section 301 action, while the List 3 25% duty remains open. Net: tariffs are currently a modest part of your cost story. The durable drivers are the export-control premium and the metal itself.

WHAT STAYED CALM

Chromium is up ~10–13% across the cycle; nickel sits modestly above a year ago. The inputs for chromium-carbide and nickel-alloy coatings moved like normal industrial metals — which is why chemistry choice is now an economic decision, not only an engineering one.

> Price certainty in either direction is a mistake; pricing in supply concentration is not.

The cost-per-part table — rebuild it with your numbers

Worked example: a hydraulic cylinder bore, 0.5 m² coated area, 300 µm WC-CoCr (density ~14 g/cm³) → 2.1 kg of deposited coating. What changes with deposition efficiency and the powder market:

DEPOSITION EFFICIENCY	POWDER PURCHASED FOR 2.1 KG DEPOSITED	POWDER COST @ ~$100/KG (2024-ERA)	POWDER COST @ ~$250/KG (2026 ILLUSTRATIVE)	POWDER WASTE (BOUGHT, NOT ON PART)
45% (published HVOF norm 45–55%)	4.7 kg	$470	**$1,175**	2.6 kg
55% (top of published norm)	3.8 kg	$380	**$955**	1.7 kg
70% (measured, axial-injection ID platform; measurement data available on request)	3.0 kg	$300	**$750**	0.9 kg

Read the right-hand columns twice. The 45%-to-70% difference (70% Spraywerx measured, data on request) on this one part was ~$170 of powder in 2024. At 2026 prices it is ~$425 — per part, before labor and gas. Multiply by your annual volume: deposition efficiency quietly became a top-three line item on every coated part, and inside internal diameters (short standoff, ricochet) the spread is wider still. The same arithmetic reframes chemistry: where chromium-carbide or iron-based coatings satisfy the wear mode, the feedstock difference is no longer marginal — it can sidestep the tungsten market entirely.

> **Assumptions stated so you can challenge them:** coating density 14 g/cm³ (WC-CoCr, dense HVOF); DE = deposited mass ÷ powder sprayed; $250/kg is an illustrative Western WC-CoCr price pending dated quotes. Our calculator lets you run your own geometry, thickness, DE, and prices.

The three levers (and who they belong to)

01 Substitute where the wear mode allows — ENGINEERING

No drop-in WC-CoCr replacement exists; substitution is a wear-mode decision. Above ~450–500°C the carbide oxidizes anyway — chromium carbide (serviceable to ~870°C) is the answer there regardless of price. Cavitation/corrosion duty favors iron-based chemistries at a fraction of the feedstock cost. Ambient abrasion and qualified aerospace applications stay on WC-CoCr — anyone who says otherwise is selling something.

02 Waste less of the tungsten you must spray — OPERATIONS + PROCUREMENT

Demand measured DE data under documented conditions from any coating supplier — including us. Brochure numbers are not data.

03 Decide on your own data — EVERYONE

Coupon and prototype trials on your actual geometry convert this briefing into a cost-per-part number with your part number on it. Qualification cycles run 12–24 months; data generated now makes 2027's deadlines administrative.

SECTION 05 — WHAT TO WATCH NEXT

What to watch next

- **November 10, 2026** — China's export-control suspension terms lapse; the licensing regime behind the two-tier market gets renegotiated.
- **Section 232 critical minerals** — the January proclamation chose negotiations over tariffs; minimum import prices remain a reserved tool.
- **DRC quota enforcement** — cobalt's floor is policy-made too.
- **The EU Cr(VI) restriction** — as chrome's runway shortens, demand shifts onto exactly these feedstocks. Companion brief: "The Double Squeeze."

Seven questions to ask your coating supplier this quarter

Take these to your next supplier review. A good supplier answers all seven without flinching; the questions themselves will tell you who you're dealing with.

01	What deposition efficiency do you actually measure on my part geometry — and by what method?
02	Where is the tungsten in my parts mined and processed? (Origin now carries price risk — the 2–3x two-tier spread — and, for defense work, DFARS compliance risk from January 1, 2027.)
03	What index is your surcharge tied to — and does it come down when the index does?
04	Which of my parts could run chromium-carbide or iron-based chemistry, and what would those quotes look like?
05	What is your powder inventory and second-source position if licensing tightens after November 10?
06	For internal diameters: what in-bore coupon data (porosity, hardness) can you show — not OD surrogates?
07	If my customer forces a requalification, what qualification data package do you provide, and on what lead time?

SOURCES

1. USGS Mineral Commodity Summaries 2026 (tungsten)
2. Fastmarkets tungsten reporting (Jun 2026)
3. CTIA European APT quotes (Jul 2026)
4. Trade-press WC powder prints (Mar 2026, per-kg-of-W basis)
5. MOFCOM Announcement No. 10 of 2025 (Feb 4, 2025); Pillsbury on the Nov 2025 suspensions
6. Benchmark/INN/CME DRC cobalt quota reporting (2025–26)
7. Supreme Court, Learning Resources v. Trump (Feb 20, 2026)
8. Section 122 sunset + successor Section 301 action incl. CBP HTS exclusion list (Jul 2026)
9. DFARS 252.225-7052 (acquisition.gov)
10. NOV Q1 2026 earnings call (Apr 28, 2026)
11. Kennametal Q3 FY2026 earnings call (May 6, 2026)
12. Almonty announcements (Jul 2026)
13. DE ranges: published thermal spray literature and vendor documentation

Full numbered citation register maintained by Spraywerx; available on request.

Run your own numbers: the Spraywerx cost-per-part calculator at spraywerx.com — or book a free 15-minute scoping call.

SPRAYWERX TECHNOLOGIES

Patent-pending ID-HVOF technology for internal diameters down to 2.5" (63.5 mm). Thermal spray and laser cladding systems, powders, and coating development.

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