Spanabhebende Präzisionswerkzeuge

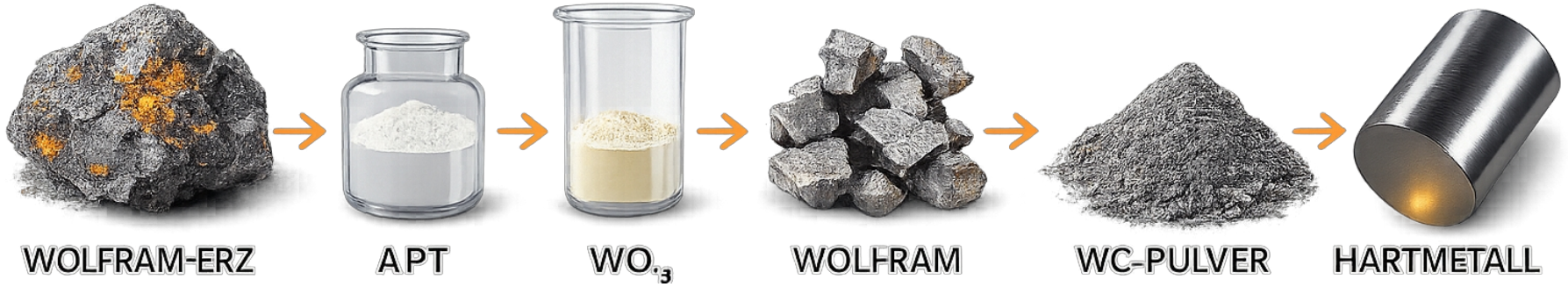
# New Pricing Model for Carbide Tools

Customer Information Regarding the Derivation from the APT Price and the New Weight-Based Surcharge

**SPPW · As of April 13, 2026**

# How the carbide price is derived from the APT price

- APT is the standard market reference price for the tungsten content in the chain.
- WC powder for cemented carbide is produced from APT via oxide, metal, and carbide stages.
- When APT rises, WC powder and blanks follow suit after a delay, thereby increasing the cost of the carbide component.




**Simplified: APT price → WC cost block + cobalt + processing + scrap + logistics**

***Crucial for customers:***
***The raw material-driven portion depends not only on the index, but also on the actual carbide weight in the tool.***

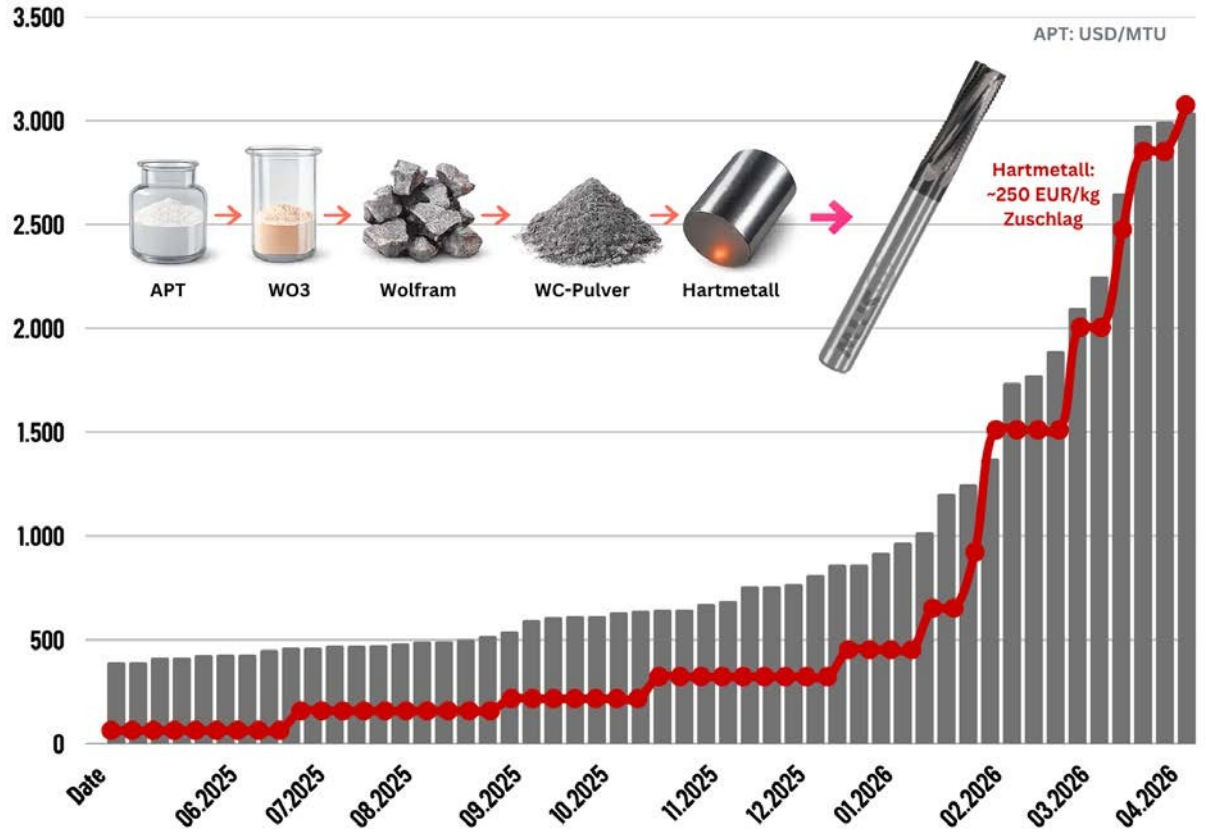
**APT is the raw material benchmark for tungsten content**

**The more carbide in the blank, the greater the impact of the increase**

# Why APT is currently becoming more expensive

- Supply is heavily dependent on China; export controls since 2025 have tightened the market.
- Declining ore grades, quotas, and tight inventories are already increasing pressure at the concentrate level.
- Demand remains strong—especially in tools, aerospace, defense, energy, and electronics.
- New mining projects offer little help in the short term, as ramp-up and permitting take years.

**In short:**
**Tighter supply + high strategic demand**
**= higher APT price**

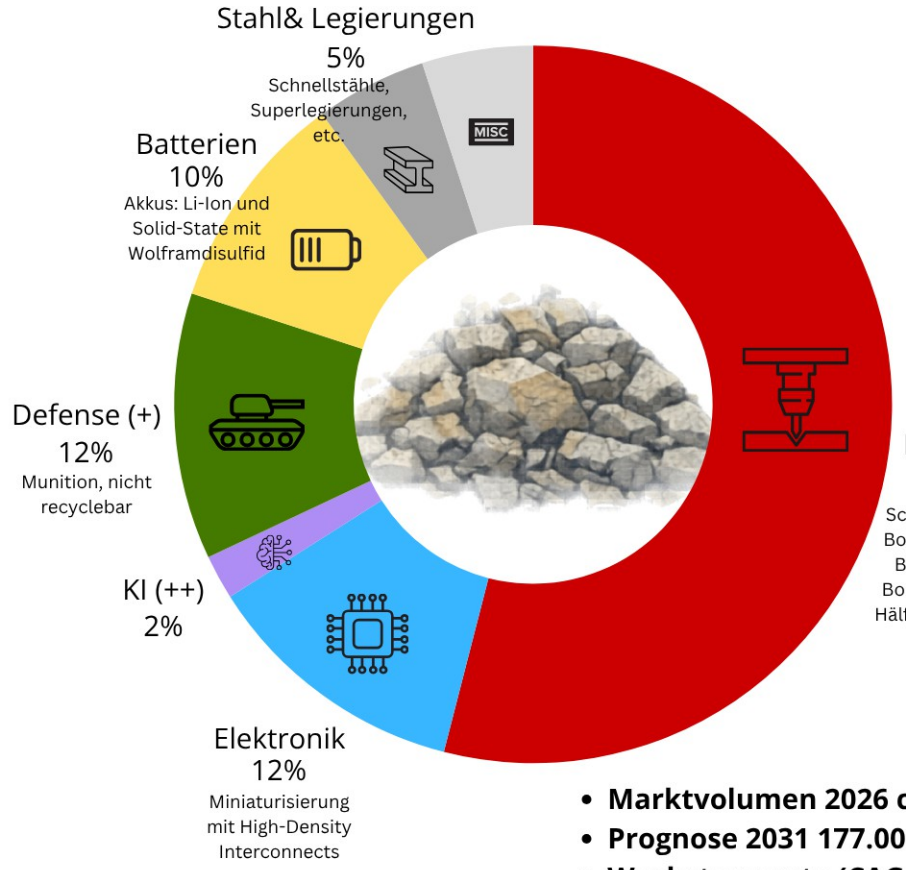



*Sample trend of the European APT benchmark (averages based on published ranges)*

# Who will need carbide in the future?

- **Carbides** **54%** Tools, including mining, oil, etc.
- **Electronics** **12%**
- **Ki industry** **2%** growing exponentially
- **Defense** **12%** growing rapidly, Ammunition is **not** recyclable
- **Batteries** **10%** rapidly increasing
- **Alloys** **5%**
- **Other** **5%**

**Is there a risk of machining applications being crowded out?**




: Mordor Intelligence, Tungsten Market 2024/2026

- **Marktvolumen 2026 ca. 140.000 t,**
- **Prognose 2031 177.000 t**
- **Wachstumsrate (CAGR) 4,65% p.a.**

# Why we do not introduce a simple linear surcharge

- A fixed surcharge per tool ignores how much carbide is actually in the blank.
- Small tools would bear a disproportionately high cost; large tools would bear too little of the raw material cost.
- As the diameter increases, the blank weight does not grow linearly, but rather disproportionately.

**Illustrative blank weights (Cylinder, ρ = 14.5 g/cm³)**

| | | |
|---|---|---|
| **Ø3×39** | approx | 4 g |
| **Ø6×60** | approx. | 25 g |
| **Ø16×92** | approx. | 270 g |

# Why a weight-dependent model is better

**01**

**Fair**

more carbide
= higher surcharge

**02**

**Transparent**

small and large tools
are handled properly

**03**

**Close to raw materials**

The surcharge is based on actual material usage

**04**

**Transparent**

Customers can review the logic per item

**This ensures that the raw material effect is accounted for where it arises: in the weight of the carbide blank.**

# How we determine blank weights

- If supplier data is available, we use the actual blank weights.
- If not, we pragmatically model the blank as a cylinder based on diameter and length.
- The weight is derived from the volume and density; from this, we calculate the surcharge per item.

**1. Geometry**

Max. diameter D and length L

→

**2. Volume**

$V = \pi \cdot (D/2)^2 \cdot L$

→

**3. Weight**

$m = V \cdot \rho$

**In practice:**
**Available supplier data takes precedence; the cylinder calculation serves as a reliable alternative method.**

*For the approximate calculation, we use a carbide density of approx. 14.5 g/cm³.*

# What data we can provide to our customers

- Blank weight per item
- Current carbide or raw material surcharge per kg
- Calculated surcharge in EUR per tool
- Effective date or reference period of the surcharge
- Structured product data upon request for easy further processing

**Goal:**
**Minimal effect on the customer's part while still ensuring full transparency.**

## Example data record per item

| | |
|---|---|
| Item number | **751100 0600** |
| Tool designation | **Solid carbide single-tooth milling cutter Ø6** |
| Blank weight | **24.6 g** |
| Surcharge rate | **200 €/kg (estimated value)** |
| Surcharge / | **4.92 €** |
| Status | **April 2026** |

# Summary

- The carbide cost block follows the APT price because APT is the raw material benchmark for the tungsten content.
- Current market movements are primarily driven by tight supply and strategic demand.
- A weight-based surcharge reflects this raw material effect more fairly, transparently, and appropriately than a percentage surcharge.
- We provide the necessary data to ensure that the application remains simple for our customers.

If you have any questions, we are happy to provide the calculation logic on a per-item basis.