

Photo of the Totten Mine, in the Sudbury basin

Sudbury Concentrates

PGM-rich, complex concentrate.

- Sudbury concentrates are produced in our Sudbury Operations and are recognized for its PGM rich content.
- Sudbury Concentrate contains Palladium and Platinum and is a very unique concentrate that only a few mines in the world produce.

Typical analysis

- **Cu** 27–34%
- Au 3-7 g/dmt
- **Ag** 70–110 g/dmt
- Pt
 2-9 g/dmt

 Pd
 4-13 g/dmt
- **Pd** 4–13 g/dmt **S** 33–36%
- **Fe** 30–32%
- Ni 0.4-0.9%
- **As** 10–50 ppm
- **Bi** 20–40 ppm
- **Cd** 20–50 ppm
- **Pb** 200–2,000 ppm
- **Sb** 1–10 ppm
- **Se** 100–150 ppm
- **Te** 20–40 ppm
- **Zn** 800–1,200 ppm

Vale's Sudbury Concentrates are produced in the Sudbury Basin, in Ontario, Canada, alongside other Sudbury nickel products.

For more information visit vale.com or contact your regional sales representative.



Carbon intensity is 2.13 tCo2e / t Cu equivalent. This calculation includes downstream emissions¹ along with both scopes 1 and 2.

1st quartile position in the carbon intensity curve of the industry.

Underground mine and mill; low grid emission factor (Ontario, Canada).

Disclaimer: The product descriptions and specifications contained in this document are made in accordance with our analyses and the methods used to produce Vale's copper products. While these descriptions and specifications are reflective of normal production lots, rather than each individual cargo, such descriptions and specifications shall in no event be deemed or interpreted as any representation, warranty or commitment by Vale in connection with Vale's copper products quality. Vale's copper products quality shall be determined only in accordance with the corresponding contract terms for each transaction agreed between Vale and Vale's customer and the quality related certificate issued under such contract.

^{1.} Downstream emissions are emitted after a product or service leaves the company's control/ownership. Updated: October 2022 © Vale Canada Limited



HS Code

 26030010 – Copper ore and concentrates

Form

- Complex, PGM-rich copper concentrate
- Moisture/humidity level: 7-9%

Logistics

Produced in Sudbury and transported by truck directly to customers in North America or to Three Rivers Port for overseas shipping

- Voyage to Europe: ~3 weeks
- Voyage to Asia: ~6 weeks