



Salobo Concentrates

Salobo Concentrates are a complex product, with high levels of Copper and Gold.

- Complex concentrate due to Cl and F level.
- Blending potential when used alongside other complex and clean products in the furnace charge.
- Low levels of As.
- Produced in compliance with the ISO 9001 and ISO 14001 quality standard.

Typical Analysis

	Lower Limit	Typical	Higher Limit		Typical	Higher Limit		Typical	Higher Limit
Cu	35%	38%	42%	Au	17 g/t	40 g/t	V	24 ppm	32 ppm
Fe	13.0%	16.5%	22.5%	Ag	30 g/t	120 g/t	Cr	100 ppm	200 ppm
C	1.5%	3.5%	6.5%	F	1,800 ppm	4,000 ppm	U	52 ppm	60 ppm
S	11.6%	14.0%	19.0%	Cl	1,200 ppm	1,500 ppm	Th	4 ppm	20 ppm
Al₂O₃	1.5%	3.1%	5.8%	Hg	100 ppb	300 ppb	Se	<60 ppm	120 ppm
CaO	0.4%	0.6%	1.2%	As	370 ppm	750 ppm	Sb	18 ppm	40 ppm
MgO	0.3%	0.7%	1.3%	Mo	0.15%	0.35%	Zn	142 ppm	300 ppm
SiO₂	7.0%	13.0%	19.0%	Bi	<140 ppm	200 ppm	Ba	<100 ppm	200 ppm
Na₂O	0.1%	0.2%	0.4%	Ni	160 ppm	400 ppm	Pb	80 ppm	140 ppm
K₂O	0.2%	0.6%	0.8%	Co	160 ppm	400 ppm	Mn	0.31%	0.52%
				Cd	23 ppm	150 ppm	Sn	<200 ppm	400 ppm
				Ti	0.1%	0.23%	P	<0.01%	0.07%

HS Code

- 26030090 – Copper ore and concentrates

Form

- Hi-Cu complex concentrate
- Moisture/humidity level: 9.5%

Logistics

Transported by road from the mine to Vale's existing rail terminal in Parauapebas (Pará), and by train on the Carajás railroad to the Itaqui Port (Maranhão).

- Voyage to Europe: ~4 weeks
- Voyage to China: ~7 weeks

Vale's Salobo Concentrates are produced in the mineral-rich region of Pará, Brazil.

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



Carbon intensity is 2.90 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.

Salobo benefits from hydroelectric power and by-product gold and silver.

Photo: Salobo rock.

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.