

## ROK Market Brief No.12

# Copper Ores Market

## Opportunities under the Korea-Central America Free Trade Agreement

The Korea-Central America FTA (K-CA FTA) brings significant benefits for CA exporters. Under the agreement, the Republic of Korea and the Central American countries will immediately or gradually reduce tariff on more than 95 percent of traded products. Such benefit will help CA exporters compete with exporters from other countries which have trade deals with Korea.

This guide provides an overview of the copper ores category that benefit from tariff reductions under the K-CA FTA and have market access.

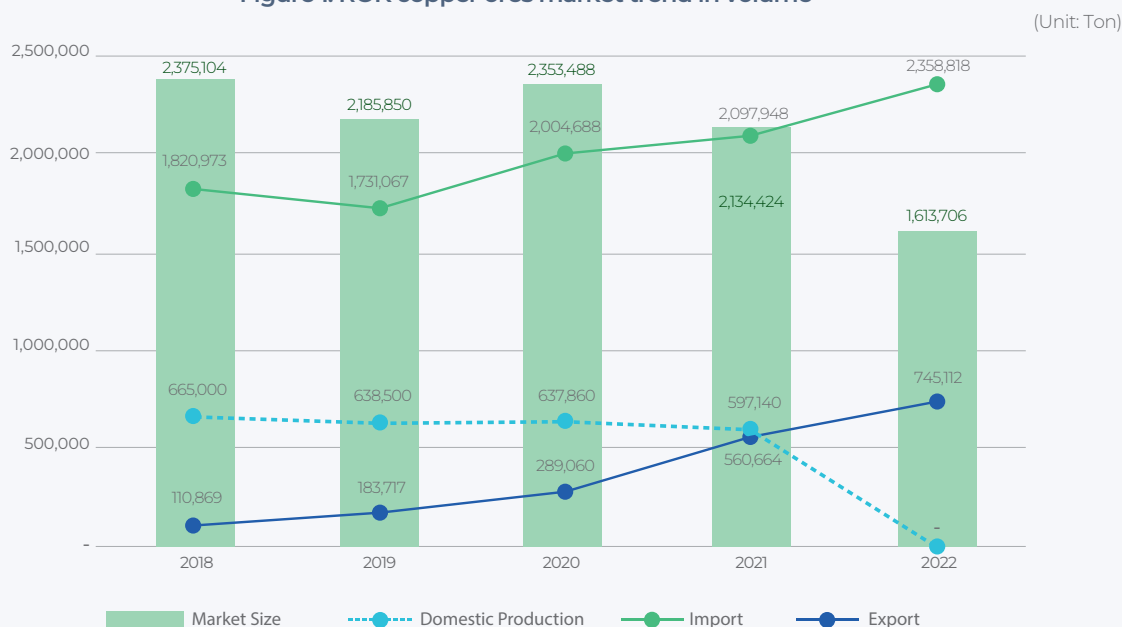


### Market Snapshot

The overall trend of the ROK copper ores market in volume is downward in the recent 5 years (2018-2022), showing an annual growth rate of -8.50%. In terms of market value, however, the average annual growth rate reached 8.07%.

Out of the total ROK copper ores market, imports constitute a significant portion of the total market accounting for 98.3% in volume and 124.5% in value as of 2022. This implies that domestic copper ore market is highly dependent on imports. Domestic production has been decreasing from 665,000 tons in 2018 to none in 2022. Exports has been increasing, meaning some of the imported copper ores are exported overseas.

Figure 1. ROK copper ores market trend in volume



**Source)** Korea Customs Service Import and Export Statistics (2023); Newswoker(2022); Korea Institute of Geoscience and Mineral Resources (KIGAM)

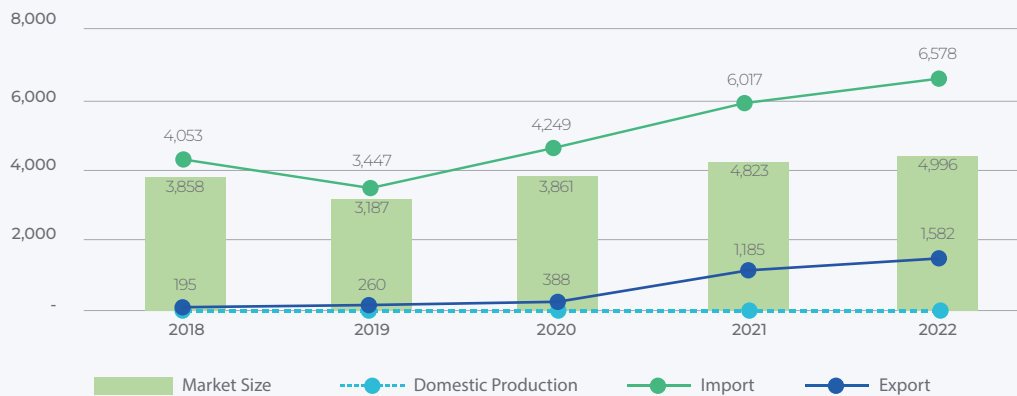
**Note 1)** Market Size = (Domestic production+Import) – Export

**Note 2)** The absence of domestic production data for 2022 has led to its representation as zero on the chart.

**Note 3)** Cooper, aluminum, nickel ores are not mined domestically, hence fully depending on the import of non-ferrous metal ores and concentrates, including cooper, nickel, palladium, etc

Figure 2. ROK copper ores market trend in value

(Unit: million USD)



**Source)** Korea Customs Service Import and Export Statistics (2023); Newswoker(2022); Korea Institute of Geoscience and Mineral Resources (KIGAM)

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While there are constant domestic demands across industries mainly in electric vehicle, construction, energy, telecom, and other manufacturing sectors in the ROK market, the volatile global copper ores price affected by closure of copper mines in Panama and Peru and global supply shortage is considered a major challenge for the ROK copper market. Such global supply deficit has an impact on the import size of copper ores in the ROK market.

Considering such factors, the domestic copper ores market size in terms of value is going to continue to increase for next 5 years from 2022 to 2027 at the similar growth rate around 8.5 to 9.0% per year. The import volume is expected to increase at a higher rate of 10 to 12% per year, to fill the supply gap as domestic mines have diminished and domestic production has been extinct in the ROK market.

In this regard, exporters can leverage the tariff elimination for imported copper ores (HS Code 260300), which stands at a base rate of 0% in the Republic of Korea, to expand to the promising ROK market.

Table 1. Tariff on HS Code 260300 as of 2024

Country	HS Code	WTO bound rate	Current rate (2024)	Elimination of custom duties <sup>1</sup>
Costa Rica	260300.0000	1%	0%	2019.11.01
El Salvador	260300.0000	1%	0%	2020.01.01
Panama	260300.0000	1%	0%	2021.03.01
Honduras	260300.0000	1%	0%	2019.10.01
Nicaragua	260300.0000	1%	0%	2019.10.01
Guatemala	260300.0000	1%	0%	-
Indonesia	260300.0000	1%	0%	2023.01.01
Australia	260300.0000	1%	0%	2014.12.12
Chile	260300.0000	1%	0%	-

**Source)** Customs Law Information Portal. (2024); FTA powerhouse, KOREA (2024)

<sup>1</sup> Effective date of the FTA: Nicaragua and Honduras(Oct. 2019), Costa Rica(Nov. 2019), El Salvador (Jan. 2020), Panama (Mar. 2021), For Guatemala, it is assumed in the report that the FTA will come into effect within the year 2024.



## Competitive Landscape

The major suppliers of copper ores to the ROK market are Chile, Indonesia, and Australia, accounting for 56% of total imports. The detailed import statistics in volume from 2018 to 2022 is presented in the table below.

**Table 2. Import volume of copper pres per country (2018-2022)**

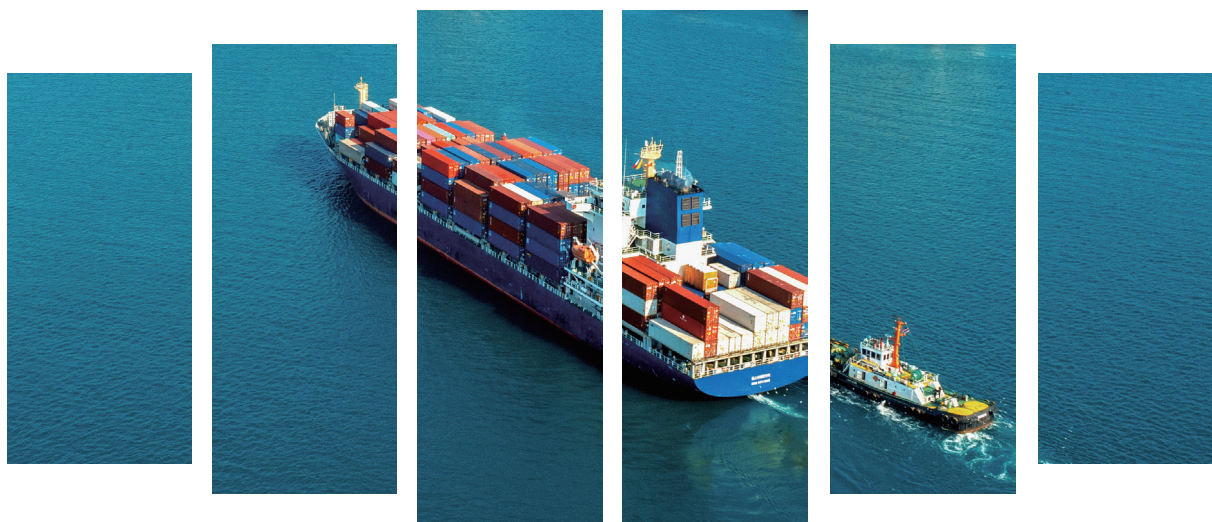
(Unit: Ton)

	2018	2019	2020	2021	2022
Chile	710,342	735,266	764,633	382,806	476,470
Indonesia	255,453	93,818	107,270	301,262	461,761
Australia	131,452	116,314	192,930	377,214	379,675
Peru	271,410	278,549	467,940	451,931	237,079
Montenegro	0	0	0	22,656	192,725
Canada	185,187	211,561	176,929	214,808	179,966
Panama	0	13,288	91,246	142,978	108,797
UAE	0	12,486	27,903	37,527	89,510
Philippine	24,795	15,099	40	19,979	79,533
Others	242,334	254,686	175,797	146,787	153,303
<b>Total</b>	<b>1,820,973</b>	<b>1,731,067</b>	<b>2,004,688</b>	<b>2,097,948</b>	<b>2,358,819</b>

**Source)** Customs and Excise Department import and export statistics (2023)

From 2018 to 2022, Chile, Indonesia, and Australia show strong dominance in the imported cooper ores market in ROK. This can be attributed to several factors: Chile is the world's most copper exporting country; In 2020, Chile's copper exports amounted to 16 million USD, or about 8% of global exports, and Korea was the third biggest exporters. In addition, Australia also boasts large amount of copper reserves in the world; As Of 2020, Australia's copper reserve is world's third (10%), and the export volume is world's fifth (5%).

It is also important to note the sudden surge of Panama, started from 2020 which can be attributed to the supply contract with LS MnM; LS MnM will annually receive a stable supply of top-quality copper ore from 2020 to 2034, totaling 120,000 tons, from the Cobre Panama mine in Panama, which holds the tenth position among the world's largest copper mines, boasting a reserve of 2.14 billion tons. The ores imported from overseas contain copper levels ranging from 25% to 28%.





## Consumer Preference

For copper ores/concentrates, one of the most important factors that ROK smelter require is its Grade. Grade represents the percentage of copper contained in the concentrate and is a crucial parameter that indicates the purity and quality of the concentrate. Once natural copper is mined, it needs to go through mineral dressings which is done by mining companies; this process makes natural raw copper into copper ore concentrates and determines the grade of the concentrates. The higher the grade of this copper ore concentrates is, the higher the metal recovery rate will be made which means, with higher metal recover the smelter company can produce more intended final products, such as electrolytic copper cathodes.

This is the reason why high grade of copper ore concentrates is the major preference factor for smelter companies. For this reason, smelter companies prefer copper ore concentrates from Escondida mine, the biggest copper mine in the world located in Chile, as their concentrates are with 30% of grade, which is higher than the world's average grade of 25%.

Another factor of consumer preference is long term contract with mining companies. Since ROK does not have natural reserves of copper, supply of copper ore concentrates is solely relied on its import. For industries with high copper import dependencies, signing long-term contracts with suppliers can provide price stability and predictability. This approach can help mitigate the impact of short-term price fluctuations and ensure consistent copper supply.



## Main Distribution Channels

Given South Korea's lack of domestic copper ores and concentrates production, many local enterprises find themselves dependent on foreign sources, maintaining certain levels of import demand.

Daechang Co. Ltd. strategically procures copper ores and other raw materials from both domestic and international sources. Seowon, specializing in the production and sale of copper alloys, is another supplier, securing various raw materials through a combination of domestic sourcing (72%) and imports (28%).

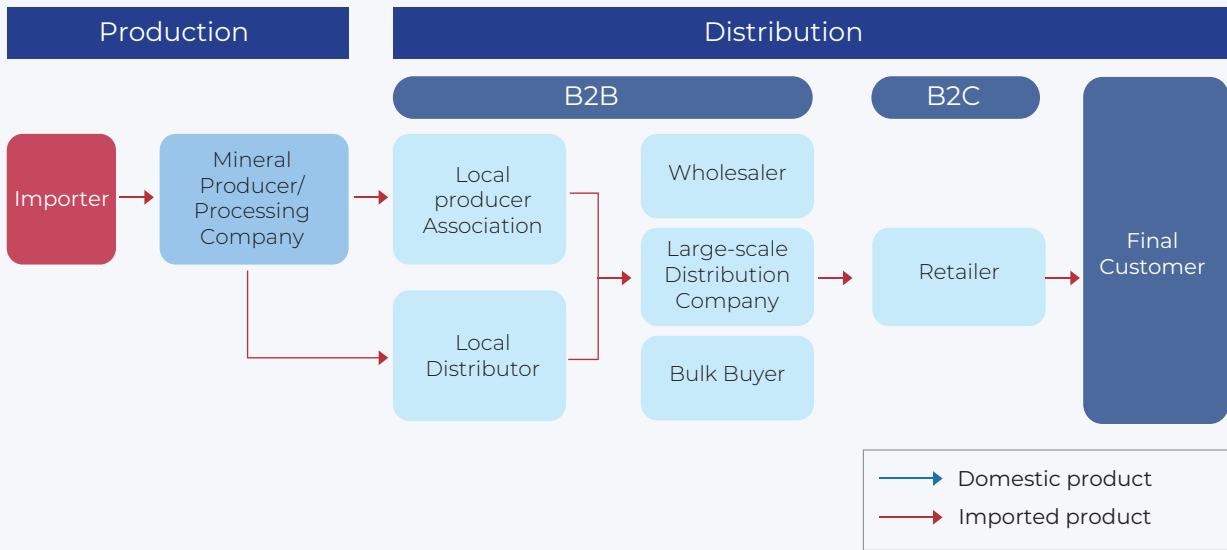
Another notable player in the domestic copper sector is LS MnM which is the major consumer for copper ore in ROK who refines and produces electrolytic copper cathode from the imported copper ores/concentrates. The amount of their production accounts for 97% among the total domestically produced electrolytic copper cathodes.

The imported raw copper ore, whether imported or locally sourced, is sent to mineral producers or processing companies to be crushed or grinded and screened to a specific size to be distributed. Copper product can also be distributed and sold in bulk or tonnage after further chemical or physical production processes to manufacturers that has in-house second processing capacity.

Quicklime or desulfurization lime, necessary for further processing, is often sold through national metal & mineral producer associations, and large-scale consumers place orders and participate in bids either individually or through consortiums.

The final products of copper after processing and manufacturing stages, such as electric appliances, kitchen utensils, musical instruments, could reach final customers via retailers or independent stores.

### Figure 3. Distribution Channel of Copper Ores



Source) Ministry of Trade, Industry, and Energy (2016)

## Regulations

## Import Requirements

Under the laws and regulations of the Republic of Korea, there are no specific import requirements regarding Copper Ores (260300), thereby allowing importation from all countries worldwide.

## Import Process

Copper Ores and Concentrates can be imported upon the preparation of shipment documents from the exporting country. Based on the shipping documents, after customs clearance process and payment of customs duties, the imported products could be transferred to the importer.

## Other Obligations and Cautions

In the case of Copper Ores, there is no requirement for indicating the origin country, as it is not a designated item for origin labeling. Additionally, there are no peculiarities to note during the import process.



## SWOT Analysis



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### Strengths

Korea's industrial landscape, notably electronics, automotive, and manufacturing, has generated a steady and increasing demand for copper ore within the country. Such demand is driven by the indispensable applications of copper in various high-tech industries, and the nation's advanced technological prowess consistently fuels market demand across various sectors, rendering it a valuable commodity in the Korean market. Korea's industrial diversity generates a multifaceted demand for copper products, ensuring a stable market for copper ore, reducing reliance on a single sector and enhancing resilience against market fluctuations.

Most importantly, the ROK-Central America Free Trade Agreement (K-CA FTA) would further enhance the appeal by eliminating the tariff on imported Copper ores and concentrates, providing a competitive edge for potential CA suppliers, and facilitating their entry into the Korean market. With K-CA FTA, CA exporters are expected to enjoy the full tariff-free status immediately as the agreement went effective.



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### Weakness

While the production of refined copper reached 597.14 thousand metric tons in 2021, there is no copper reserves in ROK, fully depending on the import source of copper ores and concentrates. Against this backdrop, coppers' high price fluctuation makes copper ore more susceptible to import demand.

According to London Metal Exchange (LME), copper has shown an average of 2% price volatility per day since 2010, as a consequence of the various complex factors, such as mining production, global demand, U.S. dollar index (USDx), producer price index, inventory levels, scrap availability, and even geopolitical circumstances. Such price uncertainty affects the import volume of copper ores and concentrates in the ROK market, which consequently affects CA suppliers' export plans to ROK.

As futures contracts are preferred for transactions of such commodity with price volatility, the absence and lack of relationships with Korean industrial manufacturers is a weakness factor for new entrants of the ROK market.





## Opportunities

Copper is a vital metal resource with diverse applications across industries such as electronics, automotive, and construction, thanks to its high thermal and electrical conductivities serving as a key component in Korea's flourishing economy. Its significance extends to energy and automobile industry, as well as electronic appliance market, where copper plays a crucial role in transporting and storing electricity. The rise in demand for copper is particularly notable in the context of the expansion of environmentally friendly and clean energy industry, such as electric vehicle, wind and solar power generation markets.

Traditional internal combustion engine vehicles use approximately 20 kg of copper per unit, while pure electric vehicles require around 83 kg, and plug-in hybrid electric vehicles (PHEVs) utilize about 60 kg. The shift from engines to motors and from fuel to batteries is the primary driver, as copper serves as a fundamental raw material for the battery's main component, copper foil. Projections indicate that the demand for copper in electric vehicles is expected to reach 5.32 million tons by 2030. Furthermore, the global copper demand is anticipated to climb from 25.02 million tons in 2021 to 32.88 million tons by 2030, presenting significant opportunities for the copper market.

On the other hand, Korea's dependence on imported copper ore results in the limited control over the pricing. Shifts in global market price can directly affect the costs incurred by domestic industry and has an impact on their profitability and operational efficiency. Such heavy reliance requires Korean market to diversify its supplier pool. For Central America, this factor can be seen as an opportunity for stable supply of copper ores to meet the ROK market's demand.



## Threats

Although the demand for copper continue to increase in energy industry, the same trend does not appear to be happening in the construction industry, which constitutes another significant portion of copper demand. A downturn in the South Korean construction industry naturally presents unfavorable conditions for the copper market.

As of June 2023, the domestic construction industry was anticipated to remain sluggish in the second half of the year, mirroring the trends observed in the first half. Projections suggested a 6.6% decline in domestic construction orders, amounting to roughly 160 billion USD, which is a 12.9% decrease from 2022.

Also, high competition amongst major exporter countries is expected. The potential competitors who show steady and strong market presence in ROK's copper ore market are Chile, Peru, and Indonesia. These three countries have been the top 3 exporters during the past 5 years, accounting for 53% of the total market when combined. As of 2023 by volume, the most exporting country, Chile, had exported 20% of copper ore to ROK followed by Indonesia (19%) and Peru (14%). The presence of top exporters and expected competition could be a potential threat factor for CA exporters.



## Business Case

### ROK Market Insights

- High dependence on imported copper ores and concentrates for relevant domestic industries
- Growing demand of copper ore and concentrates in ROK battery industry

### Niche

- To partner with reputed industry-specific associations to build a business with major copper ores consuming companies

### Cultural Adaptation

- Understand Korean's main usage of copper ores and concentrates
- Understand Korean final consumers' customary practice when dealing business
- Understand Korean consumers' quality and price standard for nonferrous metal

### Strategy Snapshot



- To promote long-term sustainable export of Central American countries' copper ores and concentrates to ROK market, it is requisite to reinforce cooperative framework between ROK and resource possessing CA countries in a form of Economic Framework and/or Core Mineral Security Partnership.
- To enhance the visibility and exportability of Central American countries' copper ores and concentrates to ROK market, it is recommended to use and participate in the various B2B promotional campaigns hosted in ROK on the preferential basis.
- To foster a successful and sustainable export of Central American countries' copper ores and concentrates to ROK market, it is recommended to partner with dependable ROK importers who has long-term relationship with ROK mineral processing companies and final user companies.



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