ROK Market Brief No.16 Aluminum Waste 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 aluminum waste category that benefit from tariff reductions under the K-CA FTA and have market access.



Market Snapshot

The overall trend of the ROK aluminum waste market presents a stable and steady growth, with consistent increase in value observed in recent years. The market value showed an annual growth rate of 10.37% while the market volume grew at an annual rate of 4.79% from 2018 to 2022.

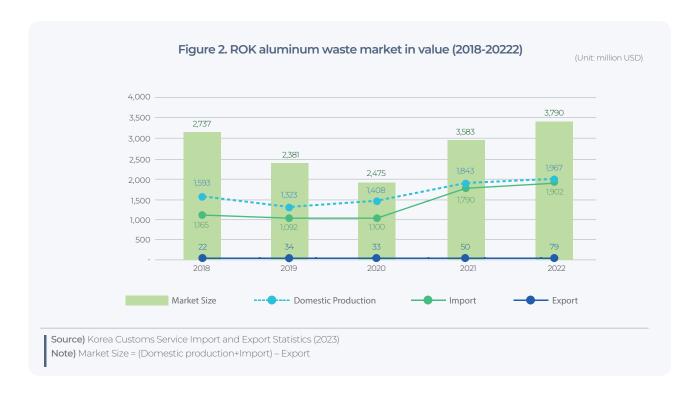
Out of the total ROK aluminum waste market, the proportion of domestic production is significant accounting for 54.66% in volume and 51.9% in value. The proportion of import is also very significant, accounting for 47.6% in volume and 50.2% in value. Conversely, exports constitute a much smaller proportion, accounting for only 2.3% of the volume and 2.1% of the value.



Source) Korea Customs Service Import and Export Statistics (2023)

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

2) Domestic production is estimated by calculating the annual average price per ton based on the export statistics using HS CODE 760200, then substituting this calculated average price into the yearly production amount data to obtain the estimated value



As the industrial demand increases in the ROK market, the market is forecasted to follow the current growth pattern. Since the annual price of aluminum waste/scrap is volatile, it is considered appropriate to forecast the market growth based on the volume size. In this regard, for the next 5 years from 2023 to 2027, the market size is estimated to grow at an annual rate of 4% in volume.

In this regard, exporters can leverage the tariff elimination for imported aluminum waste and scrap (HS Code 760200), 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 760200 as of 2024

Country	HS Code	Product	WTO bound rate	Current rate (2024)	Elimination of custom duties ¹
Costa Rica	760200.1000	Waste and scrap of aluminum cans	3%	0%	2019.11.01
Costa Rica	760200.9000	Other	3%	0%	2019.11.01
516.1	760200.1000	Waste and scrap of aluminum cans	3%	0%	2020.01.01
El Salvador	760200.9000	Other	r 3%	0%	2020.01.01
Panama	760200.1000	Waste and scrap of aluminum cans	3%	0%	2021.03.01
	760200.9000	Other	3%	0%	2021.03.01

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.

Country	HS Code	Product	WTO bound rate	Current rate (2024)	Elimination of custom duties ¹
Honduras	760200.1000	Waste and scrap of aluminum cans	3%	0%	2019.10.01
Hondulus	760200.9000	Other	3%	0%	2019.10.01
Nicaragua	760200.1000	Waste and scrap of aluminum cans	3%	0%	2019.10.01
Mediagaa	760200.9000	Other	3%	0%	2019.10.01
Guatemala	760200.1000	Waste and scrap of aluminum cans	3%	0%	-
Gateman	760200.9000	Other	3%	0%	-
USA	760200.1000	Waste and scrap of aluminum cans	3%	0%	2012.03.15
	760200.9000	Other	3%	0%	2012.03.15
Thailand	760200.1000	Waste and scrap of aluminum cans	3%	0%	-
mananu	760200.9000	Other	3%	0%	-
Japan	760200.1000	Waste and scrap of aluminum cans	3%	0%	-
Japan	760200.9000	Other	3%	0%	-

Source) Customs Law Information Portal. (2024); FTA powerhouse, KOREA. (2024); FTA agreement and basic documents



Competitive Landscape

The major import sources of aluminum waste and scrap are USA, Thailand, and Japan. The total import volume reached 995,652 tons in 2022 and about 458,649 tons were from the three major suppliers, accounting for 46% of total aluminum waste/scrap imports.

Table 2. Import volume of aluminum waste and scrap per country (2018-2022)

(Unit: Ton)

Country	2018	2019	2020	2021	2022
USA	213,894	261,722	289,373	254,584	272,490
Thailand	103,911	92,472	91,272	79,681	99,854
Japan	91,292	107,973	120,344	96,681	86,305
Australia	24,984	23,208	38,336	58,018	68,804
Taiwan	30,318	32,940	36,586	53,999	67,508
Saudi Arabia	19,490	25,087	31,555	38,765	38,446
Canada	8,210	11,401	24,451	40,407	38,291
UAE	29,504	30,812	31,428	37,780	29,379
Philippines	18,578	25,438	19,327	28,556	27,248
Others	233,386	274,895	282,092	351,860	267,328
Total	773,566	885,947	964,764	1,040,332	995,652

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

Within imported products, USA, Thailand, and Japan products show the majority of share over the past five years, however, given the Top 1 country's import share shows merely 27% among the total import volume, it is said that aluminum waste/scrap has variety of export players in the ROK market.

Among all other exporters, USA takes the largest exporter position in the commodity group. In 2022, USA accounted for 18.3% (3.88 billion USD) of total world's aluminum waste/scrap followed by Germany (10.6%), Hong Kong (7.05%), and Canada (6.42%).



Consumer Preference

The foremost important preference factor for aluminum scrap would be by far the price. As aluminum scrap is not the first mined metal but recycled, it is relatively easy to obtain and hard to discern its quality. While Chinese aluminum scrap is rising again with comparable quality unlike the past, price competition would become fiercer.

When observing the aluminum scrap's preference from the lens of usage in the industry, its preference from the automobile industry will increase constantly. Aluminum is expected to be continuously applied as a promising material for lightweighting automobiles in the future. Hence, to secure such widely used aluminum scrap, pertinent strategies on pricing would be necessary.

Main Distribution Channels

Within the ROK market, aluminum waste/scrap comes from three main supply sources: by-products generated during aluminum manufacturing/ processing, recycling of aluminum waste materials, and collection of used aluminum, such as aluminum cans. Depending on these sources, the supplier of aluminum waste/scrap can be categorized into three as aluminum manufacturing/processing companies, aluminum recycling companies, and aluminum collection/ distribution specialists.

Table 3. Major Domestic Suppliers

Category	Utilization Method	Key Features
Aluminum manufacturing/ processing companies	By-products from the aluminum rolling and extrusion production processes	 Aluminum manufacturing companies that produce intermediate or finished products through rolling and extrusion recycle the byproducts generated during production. Representative companies include Novelis Korea, Ulsan Aluminum, Lotte Aluminum, Choil Aluminum, ALUKO, and Namsun Aluminum.
Aluminum recycling specialist companies	Recycling of aluminum waste materials	 Recycling specialist companies collect and reprocess aluminum waste materials to supply recycled aluminum raw materials to aluminum manufacturing/processing companies. Representative company is DS LIQUID.
Aluminum collection/ distribution specialists	Collection of used aluminum	 Collect aluminum products, such as aluminum cans and sash window frames, undergo various distribution stages, and deliver to aluminum manufacturing/processing companies. Collection businesses are commonly known as scrap dealers, with the Korea Association of Scrap Dealers being a representative organization.

Source) DS LIQUID website. (year unknown); NICE INFORMATION SERVICE. (year unknown); ALMAC Quarterly Report. (Nov. 2023); Korea Association of Scrap Dealers. (Aug. 2016). Monthly Scrap Dealers VOL. 11

Domestically sourced aluminum waste and scrap are directed to aluminum manufacturing and processing entities, encompassing the collection of aluminum waste and by-products from aluminum manufacturing or processing, and procurement from suppliers specializing in used aluminum materials.

Within the domestic production channels, approximately 50 to 60% of the supply originates from the recycling of by-products generated during aluminum manufacturing or processing, while 30-40% is acquired through aluminum scrap collectors. Additionally, around 10% or slightly less is contributed through supply chains involving recycling companies.

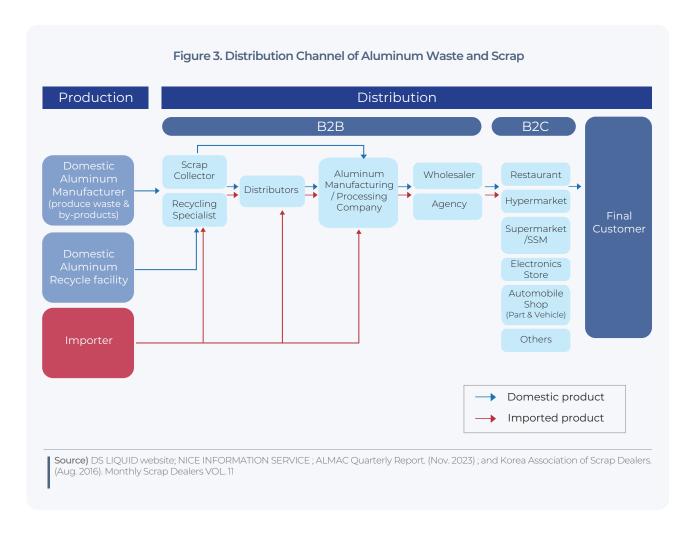
In the case of imported aluminum waste and scrap, importers play a pivotal role in supplying them to aluminum manufacturing or processing companies. Additionally, these imports can also be distributed through indirect channels involving intermediaries such as distributors and recycling specialists. Importers who have their own aluminum product manufacturing facilities make use of the imported waste and scrap to produce aluminum products. Some major ROK importers of Aluminum waste is listed in the table below:

Table 4. Major ROK importers of Aluminum waste

No.	Company name	Enterprise scale	Import value (Unit: million USD)	Industry classification	Major importing countries	Address	Tel	Website
1	Novelis Korea Ltd.	Midsize business	Exceeds 100	Aluminum rolling, extruding, and drawing product manufacturing	Thailand, Japan	23, Jeokseogongdan- ro, Yeongju-si, Gyeongsangbuk-do, Republic of Korea	+82- (0)54- 630- 7114	www. novelis. co.kr
2	Hiho Metal Co., Ltd.	Midsize business	Exceeds 100	Primary metal product wholesale	Australia, Saudi Arabia	5F, 8, Seolleung-ro 131-gil, Gangnam- gu, Seoul, Republic of Korea	+82- (0)2- 514- 6671	www. hihometal. com
3	Onse International Co., Ltd.	Midsize business	Exceeds 100	Primary metal product wholesale	Taiwan, Saudi Arabia	102-706, 69, Hangang-daero, Yongsan-gu, Seoul, Republic of Korea	+82- (0)2- 711-9111	www. onseintl. com
4	Coral International Co., Ltd.	SMEs	Exceeds 100	Metal ore wholesale	USA	7, Simin-daero 327beon-gil, Dongan-gu, Anyang- si, Gyeonggi-do, Republic of Korea	+82- (0)31- 382- 4523	-
5	Sambo Industry Co., Ltd.	Midsize business	50 ~ 100	Aluminum refining, smelting, and alloy Manufacturing	USA	36, Namui-ro 21beon-gil, Jinhae- gu, Changwon-si, Gyeongsangnam-do, Republic of Korea	+82- (0)55- 552- 7130	www. samboind.kr
6	Sejin Metal Co., Ltd.	Midsize business	50 ~ 100	Aluminum refining, smelting, and alloy manufacturing	USA	15, Wonbong-ro, Onsan-eup, Ulju- gun, Ulsan, Republic of Korea	+82- (0)52- 240- 0200	www. sejinmetal. com
7	ALTECHNO Metal Co., Ltd.	Midsize business	50 ~ 100	Aluminum refining, smelting, and alloy manufacturing	USA, UAE	252, Gyeonggigwagidae- ro, Siheung-si, Gyeonggi-do, Republic of Korea	+82- (0)41- 357- 9892	www.altechno. co.kr
8	Namsun Aluminum Co., Ltd.	Midsize business	20 ~ 50	Aluminum rolling, extruding, and drawing product manufacturing	Australia, India, Canada	288, Nongongjungang- ro, Nongong-eup, Dalseong-gun, Daegu, Republic of Korea	+82- (0)53- 610- 5200	www.namsun. co.kr
9	SHINYANG Metal IND. Co., Ltd.	Midsize business	20 ~ 50	Aluminum foundry casting	Vietnam, New Zealand, USA	162, Sihwa-ro, Danwon-gu, Ansan- si, Gyeonggi-do, Republic of Korea	+82- (0)31- 432- 3561	www.shin- yang.com
10	HANYUNG Metal Co., Ltd	SMEs	20 ~ 50	Aluminum refining, smelting, and alloy manufacturing	UK, USA, China	11, Cheoyongsaneop 1-gil, Onsan-eup, Ulju- gun, Ulsan, Republic of Korea	+82- (0)52- 716- 3100	www.hymetal. co.kr

Source) KOIMA (www.koima.or.kr)

In Korea, the metal recycling sector features a robust network of over 20,000 domestic metal waste collectors, commonly known as scrap dealers. These collectors play a crucial role as the initial link in the recycling supply chain by diligently gathering various scrap metals. They then supply these materials to secondary scrap collectors and distributors. These secondary collectors, in turn, channel aluminum waste and scrap to aluminum manufacturing and processing companies, contributing to the circular economy.



A notable example of effective aluminum recycling in Korea is demonstrated by Novelis Korea's business model. The company embraces a sustainable approach through infinite recycling of aluminum waste and scrap, particularly in the production of aluminum cans for beverages. Novelis Korea systematically collects in-house aluminum waste and scrap generated during the manufacturing of aluminum cans, alongside external aluminum waste and scrap, both domestically sourced and imported. These materials are seamlessly reintegrated into the production process, creating a closed-loop system that enhances the environmental sustainability of aluminum manufacturing in the country.

Figure 4. Infinite Recycling Model for Aluminum Cans (Novelis Korea)



Source) Steel & Metal News (Apr. 2022)



Regulations

Korea manages import and export of waste through two distinct systems: Permit system and reporting system. The permit system regulates the import and export of hazardous waste in accordance with the OECD regulations and the Basel Convention on the Control of Cross-border Movement and Disposal of Hazardous Waste. The reporting system, on the other hand, strengthens the import and export management of general wastes other than those subject to permits.

As for the aluminum waste, import to Korea is permitted under the assumption that the imported goods are used as raw materials for the recycling industry. Therefore, the aluminum waste and scrape to be imported to Korea is only subject to regular import declaration process and does not require a permit.

Import Requirements

Aluminum Waste & Scrap (760200) is subject to waste-related import requirements under the laws and regulations of the ROK. Prior to export, preparations must be made to review the requirements for waste importation.

To import waste into the ROK, the necessary documents must be prepared according to *Article 18-2 of the Act on the Transboundary Movement and Disposal of Wastes*. The following documents are required for waste declaration:

- · Waste Import Declaration Form
- · Copy of the import contract or order specifying the CIF (Cost, Insurance, and Freight) price
- · Copy of the transportation contract for the waste (only required if transportation is contracted out)
- · Treatment plan including transportation route, mode of transport, transporter, schedule, storage location, storage schedule, recycling, and disposal methods for the waste
- · Copy of the waste handler's waste disposal permit or waste disposal declaration certificate
- · Copy of documents confirming subcontractor capabilities (only required if subcontracting)
- · Analysis results of the waste
- · Photographs confirming the type of waste
- · Import plan specifying the customs office, import date, or monthly import volume (for comprehensive import declarations)
- · Deposit certificate or insurance policy documents (may substitute for the deposit certificate or insurance policy documents for the initial month's import volume specified in the comprehensive import declaration)

Figure 5. Waste Import Declaration Form

Certificate of Import Declaration for Waste

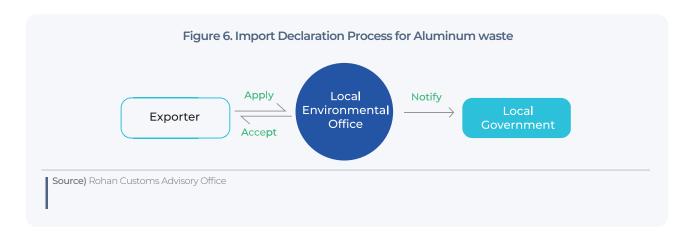
Inport Mining Maybe Import Mining Maybe

Source) Korean Law Information Center

Import Process

To import Aluminum Waste & Scrap, a contract between the exporter and importer is required. If the importer is not directly involved in waste management and a third party in the ROK handles waste, the importer should also prepare a third-party contract. The content of this contract should specify that "the waste handler assumes responsibility for the entire process, including importation." Additionally, the importer must provide information to facilitate the preparation of documents requested by the Ministry of Environment.

Once the necessary waste declaration documents are prepared, they must be submitted to the relevant Ministry of Environment for declaration. Upon approval by the Ministry of Environment, customs clearance procedures can be conducted, and after ensuring no irregularities, the goods can be received upon payment of applicable taxes.



Other Obligations and Cautions

In the case of Aluminum Waste & Scrap products, there is no requirement to indicate the country of origin. Apart from waste declaration, there are no specific considerations to note.

SWOT Analysis



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Strengths

Recently, Korean government has initiated the administrative notice of the new policy called "Circulating Resources Designation and Notification System" and "Aluminum Can Resource Circulation Ecosystem Creation Pilot Project". Both efforts intend to improve recycling rates and create a recycling ecosystem for aluminum cans and will consequently create the landscape of increasing domestic supply volume (production volume) of aluminum waste/scrap.

The recent policy-level efforts provide benefit and render a strong landscape of ROK aluminum waste/scarp market. The Ministry of Environment implemented the Circulating Resources Designation and Notification System starting January 1, 2024. Seven items, including aluminum, were designated as circulating resources, meaning they were designated as circulating resources are exempt from waste regulations if they comply with the relevant standards

Most importantly, the ROK-Central America Free Trade Agreement (K-CA FTA) would further enhance the appeal by eliminating the tariff, providing a competitive edge for potential CA suppliers. The tariff for CA countries was immediately eliminated as the agreement went effective².



Weakness

The price of aluminum scrap is subject to fluctuations driven by global supply and demand dynamics, economic conditions, and geopolitical factors. Central American exporters must navigate these price variations, which can impact profit margins and overall competitiveness. While aluminum scrap prices spiked in 2022, they fell in 2023, with average global prices between 2,200 USD and 2,500 USD per ton. Similarly, in the first quarter of 2023, the demand for aluminum scrap declined by almost 4 percent in the USA and Canadian markets.

In addition, Aluminum waste also holds challenges regarding limited availability and sourcing; the availability can be inconsistent due to factors such as the recycling process, industrial production, and end-of-life products. Unlike primary aluminum, which can be produced continuously, scrap availability depends on the volume of discarded aluminum products. Hence, the unpredictable availability from the supply perspective may consequently impact the demand projection as well.

² 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.



Opportunities

The ROK market's heavy reliance on imports of aluminum waste/scrap exhibits a high sensitivity to external changes in global market conditions and overall economic fluctuations. For Central America, this factor can be served as an opportunity to supply aluminum waste and scrap to meet the ROK market's demand and offer reliability and sustainability to the Korean market's supply.

In addition, there are an industry trend in the automobile sector to lightweight the automotive and aluminum is considered a key material for automotive lightweighting. According to the technology roadmap for small and medium-sized enterprises (SMEs) by the Korea Technology and Information Promotion Agency, the average aluminum waste/scrap usage per car increased from 5.1 percent in 1990 to 9 percent in 2012 and further to 11 percent in 2015; moreover, it is projected to reach 16 percent by 2025.

Aluminum waste/scrap is expected to be continuously applied as a promising material for lightweighting automobiles in the future. Consequently, the demand for aluminum as a core material for transportation devices, including automobiles, is expected to increase in the future. Especially when considering that ROK boasts its automotive market power ranking as Top 5 in the world, the recent trend which increases the demand for aluminum waste/scrap provides solid opportunity of export for aluminum waste/scrap from the Central American countries.



Threats

As of 2022, ROK's major importing countries of aluminum waste/scrap were United States and Thailand; Combining their importing value, it accounted for around 36% of total import value. Moreover, during the past 5 years, United States has been the largest exporter of aluminum waste/scrap to ROK with no exceptional year, and Thailand and Japan have been competing against each other as the second and the third most exporting countries. Hence, considering such strong presence of these three countries in ROK market, it is expected to have fierce competition for Central American exporters to enter ROK aluminum waste/scrap market.

Also, ROK government's recent policy effort which actively encourages recycling of aluminum may foster another competitive landscape. This measure would increase the recycling rates which in turn would increase the domestic production. Since the Ministry of Environment anticipates around 40 tons of aluminum cans will be reborn through the policy, the future competition that Central American exporters may face between ROK domestic suppliers is expected to be intensified.



ROK Market Insights

- · High dependence on imported aluminum waste/scrap for domestic production
- ROK Government's measure to improve and encourage recycling of aluminum
- · Automotive industry's growing demand on aluminum for lightweighting trend

Niche

- ·To supply low-priced aluminum waste/scrap to aluminum processing and refinery facilities
- To partner with reputed industryspecific associations to build a business with major automotive companies with sustainable volume of supply

Cultural Adaptation

- Understand Korean's main usage of aluminum waste/scrap
- · Understand Korean final consumers' – mostly automotive companies – 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' aluminum waste 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 Partnership.
- ·To enhance the visibility and exportability of Central American countries' aluminum waste 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' aluminum waste/scrap to ROK market, it is recommended to partner with dependable ROK scrap collector who has long-term relationship with ROK automotive companies as their final consumer of the aluminum scrap.

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