



# I Present Conditions for Recycling Steel Cans

## 1. What are Steel Cans? How Many Steel Cans are Produced?

- Steel cans are used for beverages such as juice and coffee (beverage cans), foods such as canned fish and orange (food cans), dried seaweed, Japanese tea and cookies (general-purpose cans), and foods and other products (18-liter cans).
- The production of beverage and food cans together amounted to 467,000 tons in 2010. This was for approximately 80% of all steel cans produced.
- In 2010, 11.8 billion beverage steel cans were produced in Japan and the per capita annual consumption was 92 cans.



Beverage and food cans together amounted to 467,000 tons



General-purpose cans 81,000 tons



18-liter cans 28,000 tons

The data were from the Iron and Steel Statistics of 2010 published by the Ministry of Economy, Trade and Industry, and the National Federation of 18 Liter Cans Manufacturers Corporative Union.

### The number of total beverage and food steel cans (Estimated values: The research conducted by Steel Can Recycling Association)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Beverage cans	17,660	15,824	14,489	13,759	13,438	12,685	12,781	12,596	12,110	11,837
Food cans	1,793	1,317	1,288	1,232	1,155	1,075	1,114	1,042	1,007	993
<b>Total</b>	<b>19,453</b>	<b>17,140</b>	<b>15,776</b>	<b>14,991</b>	<b>14,593</b>	<b>13,760</b>	<b>13,895</b>	<b>13,638</b>	<b>13,117</b>	<b>12,830</b>

(million cans)

### Marks of Steel Can

"Law for Promotion of the Utilization of Recyclable Resources" requires putting a mark on beverage cans to indicate their materials. And for general cans (i.e., cans for tea or confectioneries), the All Japan Federation of General Can Industries Association established a mark for their cans to indicate the can material. For 18 liter cans, The National Federation of 18 Liter Cans Manufacturers Corporative Union established a mark so that consumers can easily identify "steel cans" when sorting waste.



(Beverage Cans' Mark)



(General Cans' Mark)



(18 Liter Cans' Mark)

### The Steel Cans are Recycled into Cans Again!

The components of steels used in cans, cars, reinforcing bars and household electric appliances are almost identical, so that they are mixed and melted without problems.

There are six steelworks manufacturing steels for cans in Japan. All of them use steel can scrap.

The manufactured steel is delivered to can manufacturing factories where steel can scrap is returned to steel cans. Reinforcing bars are also melted to produce steel sheets for cans.

Steel cans are recycled in various forms such as in the production of cars, rails, household electric appliances, reinforcing bars, and recycled steel cans.

Material ( ) : reference number	Ratio of major and alloy components (%)	Major alloy components (%)
Steel sheets for beverage cans (SPTE T-4 CA)	Fe 99.9 + Carbon 0.02 to 0.06	Aluminum 0.005 Manganese 0.03
Steel plates for cars (SPCE)	Fe 99.99 + Carbon 0.005 to 0.01	Titanium 0.0001
Steel plates for construction (SPCC)	Fe 99.8 + Carbon 0.1	Manganese 0.5 max
Steel wire for construction (SWRM)	Fe 98 + Carbon 0.1 to 0.4	Manganese 0.3 to 1.5
H-type steel (SG415H)	Fe 98 + Carbon 0.1 to 0.4	Manganese 0.4 to 1.7 Chromium 0.85 to 1.25