

# China Recycle Steel Import Standard and Classification

7 Classification: Heavy, Medium, Small, Shredded, Bushel, Alloy steel, Cast Iron  
18 Standards

## **Heavy:**

Thickness > 6mm or Diameter > 10mm solid body

Length <= 1500mm, Width <= 600mm, Unit weight <=1500Kg

### **HRS101:**

Originate from large equipment or facilities, large rail road, large equipment material, large steel structure, large vessel etc.

Example: Machine tool, Mining Machinery, Rail Tracks, Wheel, Axle, steel structure, steel tube, Section steel, Slabs etc.



### **HRS102:**

Originate from leftover or tailings by steel processing, defective goods, degraded goods.

Example: Steel billet or Steel ingot shavings from finishing, steel defective goods, steel plate stamping leftover or tailings



### **Medium:**

Thickness > 4mm or Diameter > 8mm solid body

Length <= 1500mm, Width <= 600mm, Unit weight <=1500Kg

### **MRS201:**

Originate from medium size equipment or facilities, medium steel structure, medium ship vessel etc.

Example: Machine tool, Mining Machinery, Medium size spare parts, cast steel parts, left over from dismember or repairing of medium size vessel, steel plate.



**MRS202:**

Originate from leftover or shaving by steel processing

Example: Steel shavings or left over from steel processing, steel plate stamping leftover or tailings



## Light:

Thickness >2mm recycled steel material or Thickness <2mm new steel material

Length ≤ 1500mm, Width ≤ 600mm, Unit weight ≤ 1500Kg

### LRS301:

Originated from overaged steel product including small equipment, small motor vehicle, electric vehicle frame

Example: Small equipment, spare parts, daily life metal wares etc.



### LRS302:

Originate from medium size leftover or shaving by steel processing

Example: Steel shavings or left over from steel processing, steel plate stamping leftover or tailings

### LRS303:

Thickness <2mm, originate from steel shaving or leftover of **NEW** steel processing.

Example: Tailings or leftover from Car plate, Household appliances plate



## **Shredded:**

Stack density  $\geq 0.8\text{t/meter cubic}$

### **SRS401:**

Originate from Motor car parts

Example: Motor car parts from dismembering

### **SRS402:**

Originate from thickness  $< 2\text{mm}$ , small size recycled material

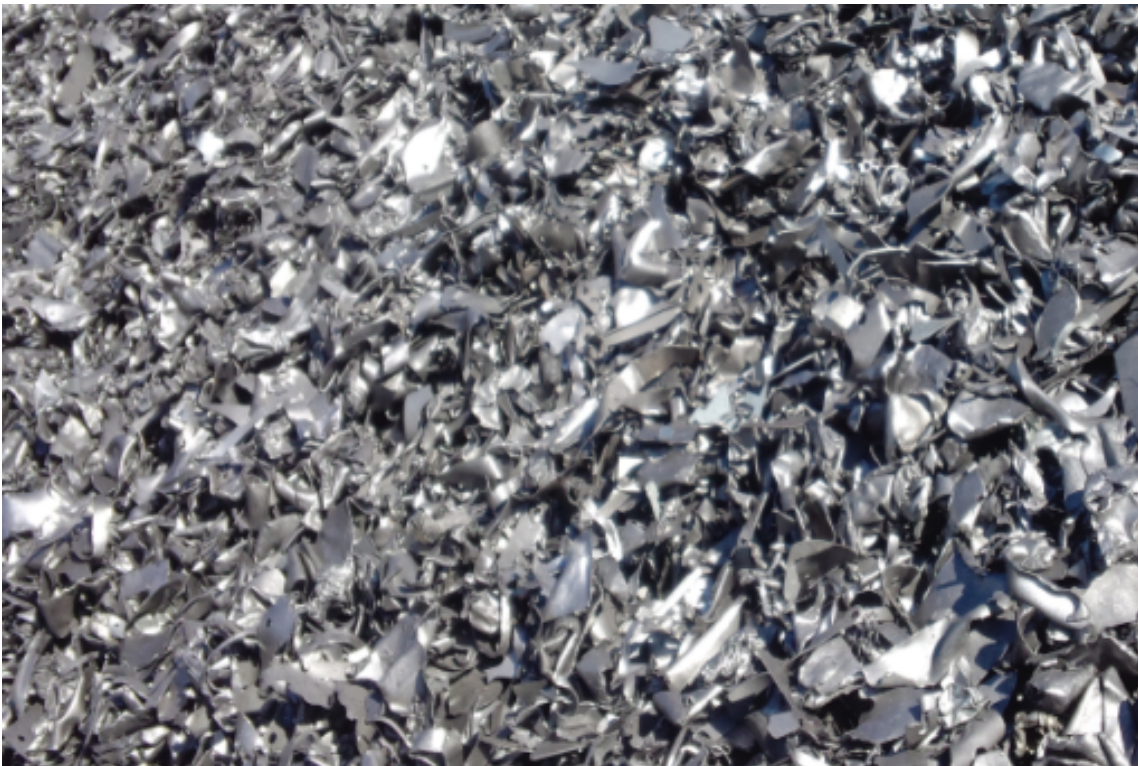
Example: recycled household appliance, machine parts, small size equipment, coated steel plate, colored steel roof/tile



**SRS403:**

Originate from industrial process leftover

Example: motor car, household appliance etc plate processing left over



## **Bushel:**

Length  $\leq 1500\text{mm}$ ; width  $\leq 1000\text{mm}$ ; height  $\leq 1000\text{mm}$ ; Unit weight  $\leq 2000\text{kg}$

### **BRS501:**

Originate from moto car plate or single source left over or shaving from processing.

Example: Car plate stamping leftover or shaving, household appliance plate, ferro silica shaving and left over.



### **BRS502:**

Originate from old steel reinforcing bar (rebar or wire rod)



**BRS503:**

Originate from steel machining shavings and steel bits.

**Alloy steel:**

Length $\leq$ 1500mm; Width $\leq$ 1000; Unit weight  $\leq$ 1500kg

**ARS501:**

Originate from Nickel chromium recycled stainless steel and leftover, Ni content $>$ 7.0%

Example: Nickel Chromium stainless steel recycled parts, tailings and leftover from processing, nickel chromium material from ship vessel dismembering such as stainless steel plate, pipe and machine parts etc.





**ARS502:**

Originate from Chromium based stainless steel recycled product or leftover. Chromium content  $\geq 11.5$

Example: Chromium based stainless steel recycled machine, equipment, structure parts. Chromium based stainless steel processing leftover and tailings.

**ARS503:**

Originate from alloy steel raw material including out of serviced tool steel, mold steel, bearing steel, gear steel, heat resistant alloy steel. Machining shaving and bits.

**Cast steel:**

Thickness $\geq 2$ mm; length $\leq 1500$ mm; Width $\leq 1000$ mm; Unit weight $\leq 1500$ Kg

**CRS501:**

Thickness $> 2$ mm, overaged cast iron product such as cast steel equipment, small cast steel product and parts.



**CRS502:**

Thickness > 2mm, cast iron tailing or leftover from processing.

**Impurity requirements:**

Class	Heavy		Medium		Light			Shredded			Bushel			Alloy			Cast	
Standard	HRS 101	HRS 102	MRS 201	MRS 202	LRS 301	LRS 302	LRS 303	SRS 401	SRS 402	SRS 403	BRS 501	BRS 502	BRS 503	ARS 601	ARS 602	ARS 603	CRS 701	CRS 702
Content (%)	0.8	0.3	0.8	0.3	0.8	0.3	0.3	1	1	1	0.3	0.8	0.3	0.3	0.3	0.3	0.8	0.3

For size < 2mm, magnetic separation will be used to separate ferrous and non-ferrous metal oxide from non-metallic impurity

(Non-Corrosive, Non-Poisonous, Non-Combustible, Non-reactive Content) < 0.01%

**Additional testing:**

Radioactive, explosivity, hazardous waste and impurity

Testing Procedure:

1. Separate non metallic from metallic material. Non metallic includes wood, paper, plastic, rubber, glass, rocks etc.

2. Screen with 2mm sieve to remove dust etc.
3. Magnetic separation
4. Non-metallic material and 2mm material minus off magnetic material = impurity content

### Conclusion:

	<b>GB/T 39733-2020 RECYCLED MATERIAL</b>	<b>GB/T 4223-2017 SCRAP MATERIAL</b>
<b>General</b>	1. Focus on separation and processing. Strict requirement on impurity and appearance.	1. No strictly specified requirement on impurity and appearance
	2. Can be added directly the the furnace	2. Scrap to be recycled separated and processed before added to furnance
<b>Description</b>	Out of service, overage, decommissioned steel products. Can be directly added to the furnance after separating and processing	Rejected steel product due to bad quality
<b>Processing</b>	Clearly specified processing requirements	No clear guidelines
<b>Appearance</b>	Clearly specified for example, no plastic, paper, fibrous material etc	No requirement
<b>Classification</b>	7 class	8 class
<b>Standards</b>	18 standard	No standards
<b>Impurity content</b>	Clearly specified	Not specified
<b>Testing procedure</b>	Clearly specified	Not specified
<b>Hazardous Content</b>	According to GB 5085.1 - GB 5085.6	Not specified
<b>Sampling method</b>	Clearly specified	Not specified