

HS Classification Manual

Comprehensive Guide to Harmonized System Classification for Metals and Minerals

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1. Introduction to the Harmonized System

Overview

The Harmonized Commodity Description and Coding System, generally referred to as the “Harmonized System” (HS), is a multipurpose international product nomenclature developed by the World Customs Organization (WCO). It comprises about 5,000 commodity groups identified by a six-digit code and arranged in a legal and logical structure supported by well-defined rules.

Structure of the HS Code

- First 2 digits: Chapter (e.g., Chapter 26 - Ores, slag and ash)
- First 4 digits: Heading (e.g., 2601 - Iron ores and concentrates)
- 6 digits: Subheading (e.g., 2601.11 - Non-agglomerated iron ores)
- Beyond 6 digits: National subdivisions (varies by country)

Purpose and Applications

- Customs tariffs and collection of international trade statistics
- Rules of origin and trade negotiations
- Monitoring of controlled goods
- Internal taxes, transport statistics, price monitoring, etc.

2. Classification Principles and Rules

General Rules for Interpretation (GRIs)

1. **GRI 1:** Classification according to the terms of the headings and relevant Section or Chapter Notes
2. **GRI 2:** Classification of incomplete or unfinished articles and mixtures or combinations
3. **GRI 3:** Classification of goods potentially falling under multiple headings
4. **GRI 4:** Classification of goods not falling under any particular heading
5. **GRI 5:** Classification of packing materials and containers
6. **GRI 6:** Classification at subheading level

Section and Chapter Notes

Legal notes that define the scope of sections, chapters, headings, and subheadings. These notes are legally binding and take precedence over all other considerations except GRI 1.

Explanatory Notes

Non-legally binding but authoritative interpretations and explanations of the scope of the various HS headings.

3. Section V: Mineral Products (Chapters 25-27)

Chapter 25: Salt; Sulfur; Earths and Stone; Plastering Materials, Lime and Cement

- 2501-2503: Salt, sulfur
- 2504-2518: Various types of earth and stone
- 2519-2524: Mineral construction materials
- 2525-2530: Other mineral substances

Chapter 26: Ores, Slag and Ash

- 2601-2617: Metal ores and concentrates
 - 2601: Iron ores and concentrates
 - 2603: Copper ores and concentrates
 - 2606: Aluminum ores and concentrates
 - 2607: Lead ores and concentrates
 - 2608: Zinc ores and concentrates
 - 2616: Precious metal ores and concentrates
- 2618-2621: Slag, ash and residues

Chapter 27: Mineral Fuels, Mineral Oils and Products

- 2701-2708: Solid mineral fuels (coal, coke, etc.)
- 2709-2715: Petroleum and petroleum products
- 2716: Electrical energy

4. Section VI: Chemical Products (Chapters 28-38)

Chapter 28: Inorganic Chemicals

- 2801-2853: Various inorganic compounds and elements
 - 2804: Hydrogen, rare gases and other non-metals
 - 2818: Artificial corundum and aluminum oxide
 - 2825: Hydrazine and hydroxylamine and their inorganic salts; other inorganic bases

5. Section XV: Base Metals and Articles (Chapters 72-83)

General Note to Section XV

This section does not cover: - Prepared paints, inks or other products with a basis of metallic flakes or powder (Chapter 32) - Ferro-cerium or other pyrophoric alloys (heading 3606) - Headgear or parts thereof of heading 6506 or 6507 - Umbrella frames or other articles of heading 6603 - Goods of Chapter 71 (precious metals, jewelry, etc.) - Articles of Section XVI (machinery, mechanical appliances and electrical goods) - Railways or tramway track assemblies (heading 8608) - Articles of Section XVII (vehicles, aircraft, vessels) - Articles of Chapter 90 (optical, measuring instruments) - Articles of Chapter 91 (clocks and watches) - Arms or parts thereof (Chapter 93) - Articles of Chapter 94 (furniture, lamps, etc.) - Articles of Chapter 95 (toys, games, sports equipment) - Hand sieves, buttons, pens, etc. (Chapter 96) - Articles of Chapter 97 (works of art)

Chapter 72: Iron and Steel

- 7201-7206: Primary materials, ingots and other primary forms
- 7207-7229: Semi-finished products and finished steel products

Chapter 73: Articles of Iron or Steel

- 7301-7326: Various articles made of iron or steel

Chapter 74: Copper and Articles Thereof

- 7401-7406: Copper mattes, cement copper, unrefined/refined copper, master alloys
- 7407-7419: Copper products (bars, rods, wire, plates, tubes, etc.)

Chapter 75: Nickel and Articles Thereof

- 7501-7504: Nickel mattes, sinters, oxide, unwrought nickel
- 7505-7508: Nickel products (bars, rods, wire, plates, tubes, etc.)

Chapter 76: Aluminum and Articles Thereof

- 7601-7603: Unwrought aluminum, waste and scrap, powders
- 7604-7616: Aluminum products (bars, rods, wire, plates, tubes, etc.)

Chapters 78-83: Other Base Metals and Articles

- Chapter 78: Lead and articles thereof
- Chapter 79: Zinc and articles thereof
- Chapter 80: Tin and articles thereof
- Chapter 81: Other base metals; cermets
- Chapter 82: Tools, implements, cutlery, etc.
- Chapter 83: Miscellaneous articles of base metal

6. Classification Challenges and Solutions

Common Classification Challenges for Metals and Minerals

- Distinguishing between ore concentrates and chemical compounds
- Classification of mixed or alloyed metals
- Determining the primary component of composite goods
- Identifying the appropriate stage of processing

- Dealing with waste and scrap materials

Analytical Approaches

- Chemical composition analysis
- Physical properties testing
- Processing stage determination
- End-use considerations
- Form and presentation assessment

7. Making Classification Decisions

Classification Methodology

1. Identify the nature and function of the good
2. Determine applicable Section and Chapter
3. Examine relevant Section and Chapter notes
4. Consider potential headings and apply GRIs
5. Determine the correct subheading using GRI 6
6. Apply any relevant national subdivisions

Resources for Classification Decisions

- National customs rulings
- World Customs Organization opinions
- Expert opinions and laboratory analysis
- Industry standards and specifications
- Technical literature and product documentation

8. Documentation and Record-Keeping

Essential Documentation

- Product specifications and technical data sheets
- Chemical composition certificates
- Processing certificates
- Photographs and diagrams

- Supplier declarations and certificates of origin

Best Practices for Recordkeeping

- Maintain classification rationale for each product
- Document sources of information used
- Keep records of any rulings or official advice
- Update classifications when products change
- Review classifications periodically

9. Case Studies

Case Study 1: Classification of Ferroalloys

- Product description: Ferrosilicon containing by weight 75% of silicon
- Classification analysis: While potentially classifiable under multiple headings (silicon, ferrous products), specific provision exists in 7202.21
- Classification: 7202.21 - Ferrosilicon containing by weight more than 55% of silicon

Case Study 2: Mixed Metal Ore Concentrates

- Product description: Concentrate containing copper (40%), zinc (15%), and lead (10%)
- Classification analysis: Apply GRI 3(b) to determine essential character
- Classification: 2603.00 - Copper ores and concentrates

Case Study 3: Metal Waste and Scrap

- Product description: Mixed aluminum scrap from manufacturing process
- Classification analysis: Determine if it meets the definitions in the relevant notes
- Classification: 7602.00 - Aluminum waste and scrap

10. Reference Tables

Table A: Typical Metal Content of Common Ores

Metal	Common Minerals	Typical Grade Range
Iron	Hematite, Magnetite	30-65% Fe
Copper	Chalcopyrite, Bornite	0.5-2% Cu
Aluminum	Bauxite	30-55% Al ₂ O ₃
Lead	Galena	3-8% Pb
Zinc	Sphalerite	3-10% Zn
Nickel	Pentlandite	0.5-3% Ni
Gold	Native gold	1-10 g/t Au

Table B: Common Metal Alloy Compositions

Alloy Name	Major Components	HS Classification
Carbon Steel	Fe + 0.05-2.1% C	7205-7229 (varies)
Stainless Steel	Fe + Cr (>10.5%)	7218-7223
Brass	Cu + Zn	7407-7419
Bronze	Cu + Sn	7407-7419
Duralumin	Al + Cu + Mg	7604-7616

Table C: Metals Processing Stages and Classifications

Processing Stage	Description	Typical HS Chapters
Ore	Raw mineral	Chapter 26
Concentrate	Processed to increase metal content	Chapter 26
Matte/Sinter	Processed intermediates	Chapters 72-81
Unwrought Metal	Primary metal not worked	Chapters 72-81
Semi-finished	Worked but not final form	Chapters 72-81
Finished Products	Final metallic goods	Chapters 72-83

Disclaimer

This manual is provided for general information only and should not be considered legal advice. While every effort has been made to ensure the accuracy of the information, regulations and classification practices may vary by country and change over time. Users should consult current official sources and qualified experts for specific classification requirements.

Contact Information

For assistance with HS classification of metals and minerals:

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