Commodity code determination: systematically establishing customs tariff and material numbers

Commodity code determination refers to the systematic process of identifying the correct classification numbers for goods purchased or sold – in particular customs tariff numbers, but also internal material numbers. It is a prerequisite for correct customs clearance, use of preferences and statistical returns, as well as for a clean material master in procurement. Anyone who maintains commodity codes incorrectly or incompletely risks retrospective payment claims, delays at import and unusable evaluations in procurement controlling.

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Key facts at a glance

01 Commodity code determination comprises establishing customs tariff numbers (HS, CN, commodity codes) as well as assigning internal material numbers in the ERP system.

02 It is the basis for import duties, export controls, Intrastat returns and the use of preferences.

03 Typical sources of error are incomplete item descriptions, missing manufacturer information and inadequate documentation of the justification.

04 In practice, systematic commodity code determination often ties up interim resources; AI-supported classification suggestions significantly shorten the effort.

05 Results should be documented in a versioned manner, as customs authorities may require a traceable justification of the classification.

06 Cleanly maintained commodity codes also improve data quality, duplicate avoidance and the automation of order processing.

Definition: commodity code determination

Commodity code determination is the methodical establishment of the correct classification of a good within the meaning of the Harmonised System (HS) and the Combined Nomenclature (CN) built upon it, plus any further national additional codes. It includes checking relevant characteristics such as material composition, mode of operation and intended use. In a broader sense, it also covers the assignment and maintenance of unambiguous internal material numbers in the ERP system.

Customs tariff numbers and their levels

Classification follows a hierarchical logic: chapter, heading, subheading up to the eight-digit commodity code of the Combined Nomenclature, supplemented by national additional digits. Decisive are the General Rules for the Interpretation, the section and chapter notes and the Explanatory Notes to the Harmonised System. For multi-purpose or composite goods, the so-called essential character often determines the correct heading.

Distinction from the material number

The internal material number is a company-specific identifier in the material master and follows its own number range concepts. It has nothing formally in common with the customs tariff number, but in many companies it is linked via fields such as commodity code, country of origin and goods variant in the material master. Keeping both levels cleanly separate but consistently linked is a central task of master data management.

Methods and approach of commodity code determination

A structured process begins with a complete technical description of the good and ends with a documented, verifiable classification. Key components are a review instruction, an enquiry management system towards manufacturers and authorities, and quality assurance via sampling or the four-eyes principle.

Standardised review process

A multi-stage approach has proven effective: first, technical data sheets, drawings and safety data sheets are collected. Then the narrowing-down takes place via chapter and heading, followed by checking the relevant notes and explanatory notes. The result is established with justification in a classification dossier and approved by the customs officer. In case of disagreement, a Binding Tariff Information can be applied for from customs.

Involving suppliers and catalogues

Suppliers often already supply commodity codes with the goods; these should never be adopted unchecked, as the interests involved may differ. A standardised enquiry process comparable to the management of bidder questions in tenders is sensible: defined forms, deadlines and responsibilities. In catalogue-based purchasing via Catalog Buying, the commodity code can be stored directly on the catalogue item and automatically carried through with the order.

AI support and automation

Modern systems suggest suitable commodity codes based on item texts and attributes and output a match probability. The specialist unit checks and confirms the suggestion – automation does not replace the technical review, but typically significantly shortens the processing time. Similar approaches, such as automated duplicate detection with a duplicate score, can be transferred to classification.

Key KPIs and data quality

The quality of commodity code determination can be measured and integrated into procurement controlling. Key figures help to make bottlenecks in master data management visible and to weigh the effort against the risk reduction.

Classification rate and lead time

Two key indicators are the proportion of classified items as a share of the total volume and the average processing time per enquiry. In practice, a classification rate of over 98 per cent with ongoing business is considered a good benchmark; new items should ideally be completed within a few working days. Both figures can be evaluated directly from the ERP system or a dedicated classification software.

Error rate and correction effort

The number of subsequent corrections – for example through customs audits or queries from the freight forwarder – is an early indicator of process weaknesses. A frequent cause is incomplete descriptions in the material master, which also disrupt automatic account assignment in financial accounting. Regular sample checks by the data steward or customs officer keep the error rate permanently low.

Benefits for evaluations and compliance

Correctly classified material masters enable robust spend analyses, for example by product group or country of origin, and support the monitoring of contract compliance for framework agreements. Unit and currency master data must also be consistently maintained so that quantities and values in Intrastat returns and customs declarations are correct.

Risks, liability and controls

Incorrect commodity codes lead to incorrect import duties, missed preferences and, in extreme cases, penalties due to incorrect customs declarations. In addition, export control and sanctions list screening can be linked to the correct classification.

Financial and legal consequences

Reclaims of duties and taxes by customs, freight forwarder delays and subsequent Intrastat notifications are typical knock-on errors. Whether and to what extent liability exemptions apply depends

on the individual case; the legal assessment should always be clarified with a customs adviser or the responsible customs office. Detailed statements on liability risk are deliberately kept general here.

Internal control instruments

Proven controls are a documented approval process, annual plausibility checks of critical items and the separation of entry and approval. Audits by customs or customers – comparable to a supplier audit score – demand complete dossiers. Those who store their classification in a versioned manner and justify changes can face audits much more calmly.

Interfaces to other processes

The commodity code is interlinked with many procurement processes: it influences delivery terms such as DAP, the preference calculation within target costing and the selection of customs procedures. Even in make-or-buy decisions on in-house production depth, the customs tariff classification of deliveries across production sites can play a role.

Current developments and digitalisation

Classification is transforming from a niche topic of the customs department into a data-driven process closely linked to master data management, ERP integration and sustainability requirements.

System landscape and ERP integration

Modern solutions work directly in the material master and use machine learning for classification suggestions. Clean ERP integration ensures that changes to the commodity code automatically carry through to purchase orders, customs declarations and statistics. A clear governance is a prerequisite: roles, approvals and change history must be defined.

Sustainability, ESG and origin information

Increasingly, companies link commodity codes with sustainability data, for example for CO2 footprints or an ESG risk rating at goods level. The filtering of critical materials in a category playbook strategy also uses classification as an evaluation dimension. Precise commodity codes thus become the foundation for compliance and reporting obligations.

Commodity codes in the digital procurement process

In electronic catalogue and marketplace business, pre-classified items speed up the enquiry and ordering process and reduce queries. They also improve the findability of alternative products and thus cross-selling in procurement, as similar goods can be grouped via the code. For low-value international business, simplified procedures facilitate handling but do not replace correct classification.

Implementation in the mid-market: a guide in five steps

For companies without their own customs department, a step-by-step build-up is recommended, which delivers quick improvements with manageable effort and develops in the long term into a regulated master data process.

Stocktake and prioritisation

First, the stock of materials without or with implausible commodity codes should be analysed and prioritised by procurement volume. Often a large share of the risk falls on comparatively few items. Classification can take place step by step, starting with import items and goods subject to regulation.

Roles, resources and external support

Small teams often start with one technically responsible person working part-time and external support from customs advisers for borderline cases. It is important not to leave knowledge in individual heads but to document it in review instructions and dossiers. Training for procurement and logistics staff anchors the process in day-to-day business.

Typical metrics

Metric	Typical value
Classification rate	> 98 % *Proportion of items with a valid commodity code as a share of the total assortment; practical benchmark*
Lead time per enquiry	< 5 working days *From enquiry to approval; simple items typically significantly faster*
Correction rate	< 1 % *Subsequent corrections as a result of audits or queries; early indicator of process weaknesses*
Material master completeness	> 95 % *Proportion of master records with a complete classification field; prerequisite for reliable evaluations*

Practical example

A medium-sized mechanical engineering company with several EU production sites discovered during an internal review that around one third of import items were held in the material master without a valid commodity code. Customs declarations were handled by the freight forwarder using provisionally estimated codes, which led to retrospective payment claims and delays in the dock-to-stock process.

- Establishing a standardised classification process with a checklist form, four-eyes approval and a

versioned dossier per item

- Prioritisation by import volume; processing of the top items by a technically trained specialist unit in cooperation with the data steward
- AI-supported classification suggestions directly in the material master screen, linked to the ERP integration for ordering and customs declaration
- Supplier enquiries regarding technical specifications via a structured form, comparable to the management of bidder questions

Conclusion

Commodity code determination is a seemingly sober but business-critical topic at the interface of procurement, logistics, customs and financial accounting. Those who run it as a standardised process with clear roles, documented justifications and measurable key figures avoid retrospective payment claims and accelerate goods receipt. At the same time, the strategic benefit increases: cleanly classified material masters enable robust spend analyses, support sustainability reporting and improve data quality across the entire procurement process. AI-supported suggestion systems significantly reduce the effort but do not replace the technical review. Mid-sized companies should start with a stocktake and prioritisation by volume and gradually develop the process into a regulated master data process.

Frequently asked questions

? What is a commodity code and where can I find it?

The commodity code is the ten-digit code combination from the Combined Nomenclature (CN) that uniquely classifies goods in the EU Customs Tariff; it is based on the six-digit Harmonised System (HS). You can find it in the Electronic Customs Tariff (EZT-online) of German customs as well as in most ERP and customs software systems in the material master. The first six digits are harmonised worldwide; the further digits differ depending on the economic area.

? How do I find the correct customs tariff number for a product?

First, you should compile a complete technical description of the product: material composition, how it works, intended use and, if applicable, manufacturer information. Then, using the Electronic Customs Tariff, narrow it down step by step from chapter and heading to the commodity code, and check the relevant notes and explanatory notes. You should document the result with justification; in borderline cases, a Binding Tariff Information (BTI) ruling or advice from a customs specialist is recommended.

? Who is responsible for commodity code determination within the company?

In many companies, responsibility lies with the import/export department or a designated customs officer, closely interlinked with master data management. What matters is that the technical classification is carried out by a qualified function and that supplier- or software-generated

suggestions are not simply adopted. An approval process with documented justification protects you in the event of an audit and distributes knowledge across several shoulders.

? What happens if the commodity code is stated incorrectly?

Incorrect commodity codes can lead to incorrect import duties, which customs may reclaim subsequently; in addition, delays at import and correction effort for Intrastat returns may result. Repeated or gross errors may also lead to additional penalties; the specific individual case should be reviewed legally. A traceable documentation of the classification significantly reduces the risk.

? Can software automate commodity code determination?

Modern classification software uses item texts and attributes to suggest suitable commodity codes with a match probability and to significantly reduce manual effort. However, the final technical approval remains the task of qualified staff, since liability rests with the declarant. A combination of automated suggestions, sample checks and documented approval has proven effective.

? What does a Binding Tariff Information cost and how long does it take?

A Binding Tariff Information (BTI) is applied for at the responsible customs office; processing typically takes several weeks to a few months, depending on complexity and enquiry backlog. Fees may apply and differ depending on the procedure and legal area. Because of its binding effect, the ruling is particularly worthwhile for high volumes, critical goods or regular imports; the current fee and procedural situation should be enquired directly with customs.

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