



CBAM Definitive-Period Audit-Preparation Dossier

Public Sample - Fictional Demonstration Scenario

Document ID	CBAMV-SAMPLE-2026-0001
Report version	1.0
Reporting period	1 January 2026 - 31 March 2026
Goods scope	Iron and steel - CN 7208 39 00
Country of origin	Türkiye
Member State of import	Germany
Ruleset	CBAM-DEFINITIVE-2026.1-DEMO

PUBLIC SAMPLE NOTICE
This dossier was generated from fictional demonstration data. It shows the intended structure and calculation trace of the CBAMValid report pipeline. It is not a customs declaration, not an official CBAM Registry submission and not an accredited verifier opinion.

Document Content Root

a919968d692dafc80a4b4b51d09611fcc9dde4bd542a1c98a5183a418eeb3665

Evidence Register Root

d1cdded1567f327688a97e229ab3bdcc41907aa27a9f8e7390ba29d73b5652cb

Executive Decision Summary

Imported net mass	128.500 t
Specific embedded emissions	2.24989 tCO₂e/t
Embedded emissions of imported goods	289.111 tCO₂e
Quality-control state	0 blockers / 2 warnings

Scope conclusion

The fictional importer exceeds the 50-tonne single mass-based threshold applicable to iron and steel in the demonstration calendar year. The goods are therefore treated as within the CBAM case workflow for this sample. The final legal determination must always be made from the applicable official rules and actual import records.

Calculation conclusion

Total specific embedded emissions are 2.24989 tCO₂e per tonne. For 128.500 tonnes of imported goods, the resulting embedded emissions are 289.111 tCO₂e.

Readiness conclusion

No sealing blocker remains in the fictional case. Two warnings were acknowledged: the grid-factor source requires external confirmation in a real engagement, and the rebate statement requires verifier review.

Verification boundary

The CBAMValid integrity seal confirms internal document consistency and tamper evidence. It does not constitute authority approval or an accredited verifier opinion.

Reporting Scope and Applicability

Field	Demonstration value	Control interpretation
Reporting period	2026-01-01 to 2026-03-31	Definitive-period demonstration ruleset
Member State	Germany	Importer/declarant jurisdiction context
Country of origin	Türkiye	Third-country origin
Sector	Iron and steel	Included in the mass-threshold sectors
Annual cumulative imported mass	128.500 t	Exceeds 50 t demonstration threshold
Scope status	IN SCOPE - DEMONSTRATION	Subject to complete legal and customs review

Legal control applied

Regulation (EU) 2025/2083 introduced a single mass-based threshold and set it at 50 tonnes of net mass for the relevant sectors. This sample uses 128.500 tonnes and therefore demonstrates an in-scope result.

Fail-closed rule

If the annual cumulative mass, CN classification or importer identity is incomplete, the system must return SCOPE_NOT_DETERMINED rather than assume that the goods are in or out of scope.

Excluded assumptions

This public sample does not determine customs valuation, certificate purchase requirements, declaration deadlines, authorisation status or final liability. Those matters require current production data and the applicable official Registry workflow.

Entity, Declarant and Installation Profile

Role	Public-sample display	Status
Importer legal name	REDACTED IN PUBLIC SAMPLE	Fictional demonstration entity
Declarant EORI	DE*****2345	Format demonstration only
Responsible person	REDACTED IN PUBLIC SAMPLE	No real personal data
Installation operator	REDACTED IN PUBLIC SAMPLE	Fictional third-country operator
Installation ID	INST-DEMO-TR-001	Synthetic stable identifier
Installation country	Türkiye	Demonstration origin installation

Privacy design

The public sample contains no real company, EORI, address, contact or document path. Redacted values are absent from the underlying data model; they are not hidden behind a visual overlay.

Responsibility mapping

Responsibility	Demonstration owner
Customs and goods data	Importer / authorised declarant
Installation emissions data	Third-country installation operator
Evidence review	Case preparer and independent verifier
Final Registry submission	Authorised CBAM declarant through the official workflow



Goods and Customs Data

Field	Value	Evidence reference
CN code	7208 39 00	EVD-006
Goods description	Flat-rolled products of iron or non-alloy steel, hot-rolled, not plated or coated (demonstration classification)	EVD-006
Aggregated goods category	Iron and steel	Ruleset classification
Country of origin	Türkiye	EVD-006
Imported net mass	128.500 t	EVD-006
Customs procedure	Release for free circulation	EVD-006
Declaration reference	DEMO-26-Q1-0042	Synthetic demonstration

Classification control

The CN code is the primary goods-classification key. A change in CN code can alter CBAM scope, aggregated goods category, applicable methodology and evidence requirements.

Quantity control

Imported mass is kept separate from installation activity level. The former determines the emissions associated with the imported goods; the latter is the denominator used to determine specific embedded emissions at production level.



Installation and Production Route

Parameter	Value	Data logic
Installation ID	INST-DEMO-TR-001	Stable linkage across goods, evidence and calculations
Production route	Electric Arc Furnace	Determines route-specific applicability
Reporting activity level	4,250.000 t	Denominator for specific embedded emissions
Monitoring method	Measured activity data with documented calculation factors	Supports actual value method
System boundary	Steelmaking process and attributed energy	Prevents omissions and double counting

Zero-denominator control

Production activity level must be greater than zero before specific embedded emissions can be calculated. Missing activity level remains MISSING; a numeric zero produces ZERO_DENOMINATOR_BLOCKER. Neither state may be converted to a valid zero-emissions result.

Route linkage

The production route is linked to the goods and installation for the same reporting period. Plant-level emissions cannot be allocated to unrelated goods or a different production route.

Data Trust Model and Evidence Coverage

Datum	Value and unit	Source type	Evidence	Confidence
Activity level	4,250.000 t	PRIMARY_DOCUMENTED	EVD-004	SUPPORTED
Direct emissions	7,845.320 tCO ₂ e	PRIMARY_DOCUMENTED	EVD-001	SUPPORTED
Electricity consumed	2,940.500 MWh	PRIMARY_DOCUMENTED	EVD-002	SUPPORTED
Grid factor	0.41250 tCO ₂ e/MWh	OFFICIAL_OR_DOCUMENTED_FACTORY	EVD-003	WARNING ACKNOWLEDGED
Precursor mass	310.000 t	SUPPLIER_DECLARED	EVD-005	SUPPORTED
Precursor SEE	1.62500 tCO ₂ e/t	SUPPLIER_DECLARED	EVD-005	SUPPORTED

Traceability rule

Each material input records value, canonical unit, source type, reporting period, installation, goods linkage, evidence references and transformation history. Unsupported actual values cannot pass as verified data.

Evidence coverage

Eight synthetic evidence records cover the demonstration inputs. Public sample hashes are deterministic and are not derived from customer documents.

Direct Emissions Calculation

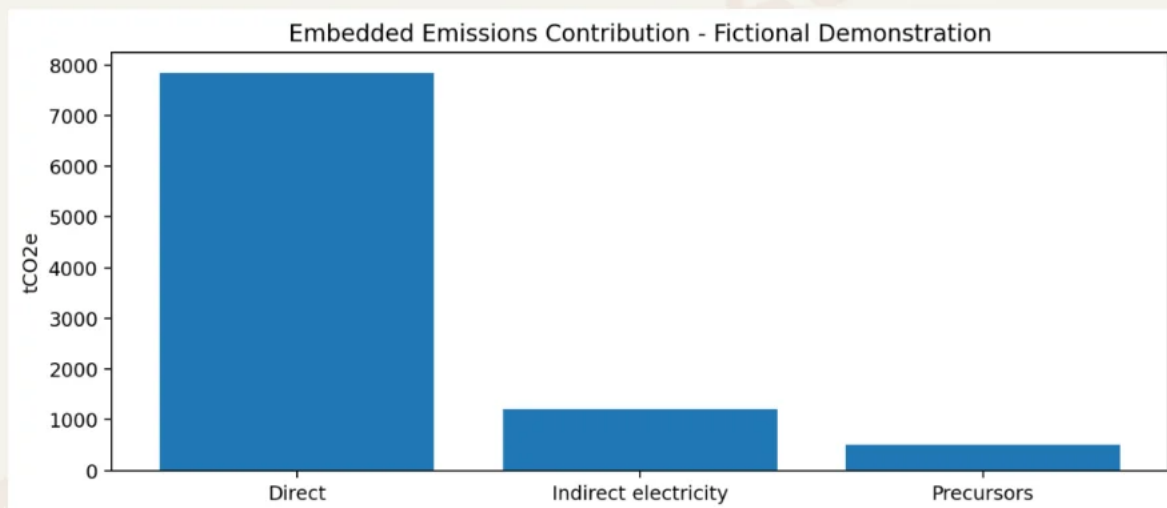
Node	Formula / input	Result
DIR-INPUT-01	Attributed direct emissions	7,845.320 tCO ₂ e
ACTIVITY-01	Activity level	4,250.000 t
SEE-DIRECT-01	$7,845.320 / 4,250.000$	1.84595765 tCO ₂ e/t

Calculation logic

Specific direct embedded emissions equal the direct emissions attributed to the production process divided by the activity level of the covered goods. The calculation uses decimal-string inputs and does not pass through binary floating-point arithmetic.

Evidence lineage

Direct emissions are supported by EVD-001. Activity level is supported by EVD-004. Both are linked to installation INST-DEMO-TR-001, the Electric Arc Furnace route and the same reporting period.



Indirect Emissions Calculation

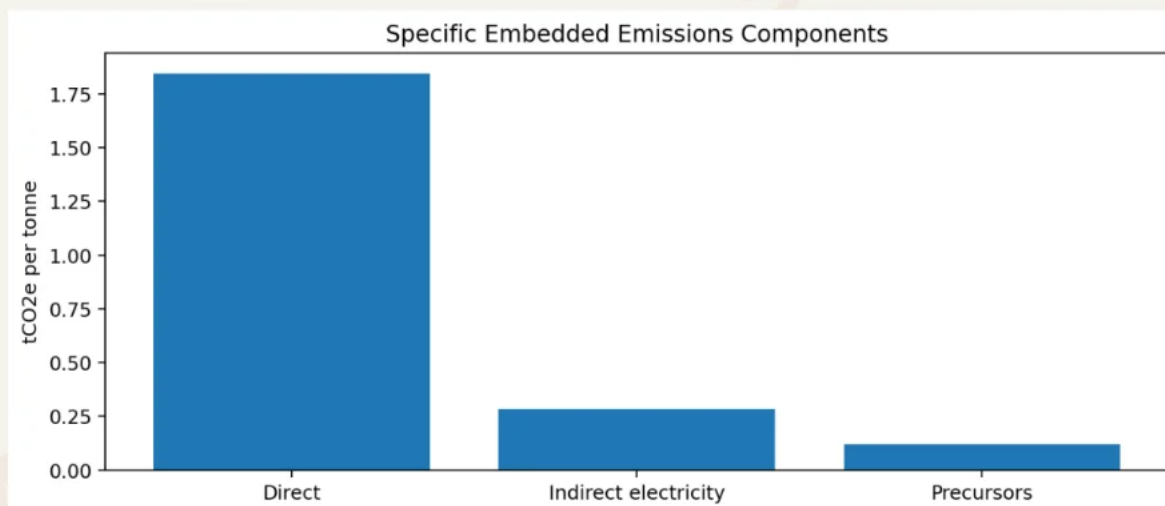
Node	Formula / input	Result
ELEC-01	Electricity consumed	2,940.500 MWh
GRID-FACTOR-01	Grid emission factor	0.41250 tCO ₂ e/MWh
INDIRECT-01	$2,940.500 \times 0.41250$	1,212.95625 tCO ₂ e
SEE-INDIRECT-01	$1,212.95625 / 4,250.000$	0.28540147 tCO ₂ e/t

Formula control

The unit registry enforces $\text{MWh} \times \text{tCO}_2\text{e/MWh} = \text{tCO}_2\text{e}$. A factor with an incompatible dimension is rejected before execution.

Warning treatment

The grid factor is accepted for this demonstration with WARNING ACKNOWLEDGED. In a real dossier the official or otherwise permitted factor source, version and applicability period must be demonstrated.



Precursors and Carbon-Price Adjustments

Item	Formula / value	Result / treatment
Precursor emissions	$310.000 \text{ t} \times 1.62500 \text{ tCO}_2\text{e/t}$	503.75000 tCO ₂ e
Specific precursor contribution	$503.75000 / 4,250.000$	0.11852941 tCO ₂ e/t
Gross carbon price paid	EUR 18,500.00	Supported by EVD-007
Rebate / compensation	EUR 2,100.00	Warning acknowledged - EVD-008
Net supported amount	EUR 16,400.00	Financial adjustment support only

Precursor control

A precursor contributes its embedded emissions to the complex good. The system records precursor mass, specific embedded emissions, source installation and reporting period, and blocks recursive cycles.

Carbon-price boundary

The carbon-price amount is not subtracted from the emissions result. It is maintained as a separate financial-adjustment evidence stream and must reflect rebates, compensation or refunds.

Consolidated Calculation Trace

Step	Calculation	Result
1. Direct emissions	Input attributed to production process	7,845.320 tCO ₂ e
2. Indirect emissions	2,940.500 MWh x 0.41250	1,212.95625 tCO ₂ e
3. Precursor emissions	310.000 t x 1.62500	503.75000 tCO ₂ e
4. Total embedded emissions	Direct + indirect + precursor	9,562.02625 tCO ₂ e
5. Specific embedded emissions	9,562.02625 / 4,250.000	2.24988853 tCO ₂ e/t
6. Imported embedded emissions	128.500 x 2.24988853	289.11068 tCO ₂ e

Rounding policy

Intermediate values are retained at high precision. Display rounding is applied only to the presented result. The underlying canonical decimal values remain available in the audit manifest.

Calculation node hash

d8ca031b6057466b669206f29842ff0ca6307b65898909ceae87f0716978cdf3

Quality-Control Summary

Control	Description	Status
QC-001	CN scope validation	PASS
QC-002	Country and territory applicability	PASS
QC-003	50-tonne threshold	PASS
QC-004	Reporting-period consistency	PASS
QC-005	Installation linkage	PASS
QC-006	Production-route completeness	PASS
QC-007	Direct-emissions completeness	PASS
QC-008	Indirect-emissions applicability	PASS
QC-009	Precursor completeness	PASS
QC-010	Precursor cycle detection	PASS
QC-011	Zero denominator	PASS
QC-012	Mass-balance reasonableness	PASS
QC-013	Actual-value evidence support	PASS
QC-014	Grid-factor source review	WARNING ACKNOWLEDGED
QC-015	Duplicate evidence hash	PASS
QC-016	Conflicting evidence identity	PASS
QC-017	Carbon-price evidence	PASS
QC-018	Rebate evidence review	WARNING ACKNOWLEDGED
QC-019	Ruleset pinning	PASS
QC-020	Calculation trace integrity	PASS
QC-021	Output parity readiness	PASS

Readiness decision

BLOCKERS: 0. WARNINGS: 2. The demonstration dossier is READY TO SEAL after warning acknowledgement. In production, any BLOCKER must reject sealing and consume zero report uses.

Evidence Register

ID	Document type	Linked datum	Issue date	Status	SHA-256 prefix
EVD-001	Operator emissions statement	Direct emissions	2026-04-12	SUPPORTED	ede39263b5f2dea4
EVD-002	Electricity invoice and meter extract	Electricity consumption	2026-04-05	SUPPORTED	96a071c71766295c
EVD-003	Grid factor source record	Indirect emission factor	2026-04-06	WARNING ACKNOWLEDGED	c245cc194559d758
EVD-004	Production ledger extract	Activity level	2026-04-09	SUPPORTED	ccc02eb6aeb25d8a
EVD-005	Precursor supplier statement	Precursor embedded emissions	2026-04-10	SUPPORTED	50410d9a5fe9568e
EVD-006	Customs declaration extract	Goods and imported mass	2026-04-03	SUPPORTED	82c1aee98ad84189
EVD-007	Carbon price payment evidence	Gross carbon price	2026-04-11	SUPPORTED	17c139363b4bc7d2
EVD-008	Rebate and compensation statement	Rebate adjustment	2026-04-11	WARNING ACKNOWLEDGED	5cd4a1d86168a51f

Register interpretation

The evidence register is an index, not a substitute for the source documents. Each record includes a content hash and explicit links to the data or calculation node it supports. The public sample contains no downloadable source documents.

Evidence root hash

d1cdded1567f327688a97e229ab3bdcc41907aa27a9f8e7390ba29d73b5652cb



Ruleset and Official Source Register

Source ID	Official instrument	Purpose in this dossier
EU-2023-956	Regulation (EU) 2023/956 establishing a carbon border adjustment mechanism	Preliminary CBAM legal framework
EU-2025-2083	Regulation (EU) 2025/2083 amending and simplifying the CBAM regulation	Risk-based threshold and related amendments
EU-2025-2547	Commission Implementing Regulation (EU) 2025/2547	Definitive-period embedded-emissions calculation methodology
EU-2025-2546	Commission Implementing Regulation (EU) 2025/2546	Verification principles, reasonable assurance and materiality

Ruleset identity

CBAM-DEFINITIVE-2026.1-DEMO is a demonstration ruleset identifier used solely for this public sample. Production rulesets must pin effective dates, source versions, formula versions, quality-control versions and dataset versions.

Official source locations

EUR-Lex ELI references: [data.europa.eu/eli/reg/2023/956/oj](https://eur-lex.europa.eu/eli/reg/2023/956/oj); [data.europa.eu/eli/reg/2025/2083/oj](https://eur-lex.europa.eu/eli/reg/2025/2083/oj); [data.europa.eu/eli/reg_impl/2025/2547/oj](https://eur-lex.europa.eu/eli/reg_impl/2025/2547/oj); [data.europa.eu/eli/reg_impl/2025/2546/oj](https://eur-lex.europa.eu/eli/reg_impl/2025/2546/oj).

Verification note

Commission Implementing Regulation (EU) 2025/2546 applies verification principles from 1 January 2026 and requires a risk-based approach aimed at reasonable assurance. The public sample does not represent an accredited verification report.

Document Integrity Manifest

Manifest field	Value
Document ID	CBAMV-SAMPLE-2026-0001
Document version	1.0
Classification	FICTIONAL_DEMONSTRATION_DATA
Ruleset ID	CBAM-DEFINITIVE-2026.1-DEMO
Engine version	CBAMValid Engine 1.0-demo
Generated at	2026-07-12T00:00:00Z
Calculation root SHA-256	a919968d692dafc80a4b4b51d09611fcc9dde4bd542a1c98a5183a418eeb3665
Evidence root SHA-256	d1cdded1567f327688a97e229ab3bdcc41907aa27a9f8e7390ba29d73b5652cb
Integrity label	CBAMValid Document Integrity Seal - Demonstration
Accredited verifier opinion	NOT INCLUDED
Official Registry submission	NO

Integrity statement

The content-root and evidence-root hashes provide deterministic references to the demonstration dataset and evidence index. The final PDF binary hash is calculated after document generation and is distributed separately in the publication manifest.

Correction model

A sealed production report must not be edited in place. Corrections create a new report version and the prior version remains available with SUPERSEDED or REVOKED status.

Limitations, Reliance and Deliverables

Limitations

This document is a public product sample generated from fictional demonstration data. It must not be used to make a customs declaration, submit data to the CBAM Registry, evidence an actual installation, calculate a customer liability or replace professional legal, customs, engineering or accredited verification work.

Independent verification boundary

CBAMValid organises calculations, evidence links, quality controls and report artifacts. It does not issue an accredited verifier opinion and does not represent acceptance by an EU institution or national competent authority.

Illustrative production package

Artifact	Purpose	Public sample status
Executive Dossier PDF	Decision summary, scope, quality and integrity information	Included
Technical Calculation Annex PDF	Formula-by-formula execution trace	Represented in this combined sample
Audit Manifest JSON	Canonical machine-readable metadata	Included separately
Evidence Register CSV	Evidence index and hashes	Not publicly distributed in this sample
CBAMValid XML	Proprietary exchange format	Not an official Registry format
ZIP Dossier Package	Controlled package of all deliverables	Production feature

END OF PUBLIC SAMPLE DOSSIER

Fictional demonstration data - not for submission - no real company or personal data