



GUIDE DEFENCE · 8 MIN READ

Dual-use: when civil technology becomes security-critical

Dual-use regulation for industrial companies: classification, licensing obligations, examples from the high-temperature sector and compliance requirements.

What does dual-use mean?

Dual-use goods are goods, software and technologies that can be used for both civil and military purposes. The EU Dual-Use Regulation (EU) 2021/821 governs the export of these goods from the European Union. For companies that manufacture high-temperature materials, ceramics or special linings, this can be of immediate relevance — even where their own product was originally developed for civil use.

- The dual-use classification relates to the technical properties of the item — not to the manufacturer's intention
- Annex I of the Regulation contains the EU-wide binding list of goods with technical thresholds
- The national export list (AWV Annex AL) may cover additional goods that are not on the EU list
- Knowledge transfer (technical assistance) and software can also be subject to licensing
- The catch-all clause (Art. 4) can also cover unlisted goods where a critical end use is known

Note: Distinguishing dual-use goods from military goods — Dual-use goods are not the same as military goods. Military goods (export list part I A) are developed specifically for military purposes and are subject to stricter licensing obligations. Dual-use goods (part I B and the EU list) are primarily civil but potentially usable for military purposes. The classification determines the licensing procedure and the competent authority.

Relevant list numbers for the high-temperature sector

For companies in refractory construction and high-temperature technology, categories 1 (materials and chemicals) and 2 (materials processing) of the EU dual-use list are particularly relevant. The technical thresholds determine whether a product is listed and therefore subject to licensing.

- 1C007: ceramic base materials and composites — fibre-reinforced ceramics with a service temperature > 1,600 °C and a density < 2.0 g/cm³
- 1A002 / 1C010: composite structures and laminates (1A002) as well as fibrous materials, prepreps and preforms (1C010) — certain carbon fibre and silicon carbide fibre products
- 1C001: materials for absorbing electromagnetic waves (e.g. radar absorbers for stealth technology) and intrinsically conductive polymers
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2B001: machine tools — CNC-controlled machining of ceramics and composites to certain accuracies

- 1C107: graphite and ceramic composites — rocket-technology-relevant grades with defined strength values

Note: Check the technical thresholds — Listing depends on precise technical parameters — temperature resistance, density, strength, purity. Check your product data sheets against the thresholds in Annex I. In case of doubt, you can apply to BAFA for a classification ruling (Auskunft zur Güterliste, AzG) — this is legally binding and free of charge.

Licensing procedures and responsibilities

Where an item is classified as dual-use, the exporter requires an export licence. In Germany, the Federal Office for Economic Affairs and Export Control (BAFA) is the competent licensing authority. The procedure distinguishes between individual licences, global licences and general licences (AGG), which are granted depending on the country of destination and the group of goods.

- Individual licence: for a specific transaction with a particular recipient — processing time approx. 4–8 weeks
- Global licence: for recurring transactions with defined recipients and goods — valid for 2 years
- General licence (AGG): for certain goods/destination combinations — no individual application required, but registration is mandatory
- End-use certificate (EUC): the end user in the country of destination must confirm the final end use and whereabouts
- Negative clearance: confirmation that an item has been checked and is not listed — legally robust documentation

Setting up an Internal Compliance Programme (ICP)

An Internal Compliance Programme (ICP) is the organisational basis for complying with export control regulations. BAFA recommends that all exporting companies set up an ICP — for companies with dual-use-relevant products it is a de facto requirement. A well-structured ICP protects the company against infringements and their consequences: administrative fines of up to 500,000 euros per infringement, custodial sentences and the loss of eligibility for licences.

- Management commitment: senior management must commit in writing to complying with export control
- Export control officer: a named individual with authority to issue instructions — not the same person as the export manager
- Classification of goods: systematic screening of all products against the control lists — updated regularly whenever products change
- Customer screening: checking all business partners against sanctions lists (EU, UN, US OFAC)
- Training: regular training for all relevant employees — sales, purchasing, dispatch, engineering
- Documentation and archiving: retain all export-relevant records for at least 5 years

Note: The BAFA handbook as a guide — BAFA provides a free handbook on setting up an ICP. It contains templates, checklists and process descriptions that medium-sized companies can implement directly. Download at bafa.de — search term 'Internal Compliance Programme'.

Frequently asked questions

Are ordinary refractory materials (fireclay, corundum) dual-use goods?

Conventional refractory materials such as fireclay, standard corundum, magnesite bricks or standard castables are generally not listed and therefore not subject to licensing. The situation becomes critical with high-performance ceramics, fibre composites, certain graphite grades and ultra-high-temperature-resistant materials that exceed the technical thresholds of the control list.

What happens in the event of an export control infringement?

Intentional export control infringements are criminal offences; negligent ones are generally punished as administrative offences. For criminal offences, the AWG provides for custodial sentences of three months to five years, and of one to ten years for breaches of arms embargoes; in particularly serious cases, sentences of up to 15 years are possible. Administrative offences can be punished with fines of up to 500,000 euros per infringement. In addition, export licences can be withdrawn and the company excluded from public contracts.

Does the supplier also have to check export control, or only the end product manufacturer?

Every exporter is independently responsible — including the supplier, where it delivers abroad directly. Where goods are supplied to a German customer (for example a prime contractor) that exports the end product, the export control obligation rests with the prime contractor. Even so, the supplier should also classify its goods and operate an ICP in order to demonstrate its duty of care.

Let us talk about your project

Reply within 24 hours on working days.

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