

UNIFE's position on Critical Raw Materials (CRMs)

October 2026

UNIFE, the European Rail Supply Industry Association, supports **treating the rail supply industry as a strategic sector and taking into consideration its needs in the European Critical Raw Materials Act (ECRMA) and the European Critical Raw Materials Centre (ECRMC).**

The importance of CRMs for the rail supply industry

1. CRMs/SRMs for the rail supply industry

The European rail supply industry is a strategic industrial ecosystem.

Railways are **critical infrastructure**; a single disruption can paralyse passenger and freight mobility. Rail is also crucial to the **EU's military mobility and defence strategy**. In this context, the European rail supply industry plays an indispensable and strategic role in enabling military mobility across the continent. The European rail supply industry is **strategic for industrial sovereignty and autonomy**. It provides key technologies, products, and services for rolling stock, infrastructure, and signalling that move millions of people every day and carry goods totalling an estimated 375 billion tonne-kilometres (tkm) every year in the EU, reflecting its crucial role in freight transport. Without these solutions, the economy would be paralysed. These technologies are also **key to European exports**. It is essential to ensure that Europe remains at the technological forefront and to **avoid strategic dependencies on non-secure suppliers from third-country state-owned or -controlled actors**.

Based on this assessment, UNIFE identified the CRMs/SRMs (strategic raw materials) **for the rail supply industry and ranked them**, with examples of the most critical applications in the rail sector. Most materials on the list below are essential for electrical and electronic equipment (EEE) across several applications (signalling equipment, safety devices, and traction).

This list is intended to support the discussion on the strategic criticality of raw materials and is not a suggestion to extend regulatory compliance obligations to additional materials.

- 1) **Copper** (Cu), essential for catenaries and cables, transformers, traction systems and signalling equipment.
- 2) **Nickel** (Ni), essential for batteries and stainless steel.
- 3) **Bauxite/alumina/aluminium** (Al), essential for car bodies and aluminium sheet.
- 4) **Silicon metal** (Si), essential for antennas and power electronics.
- 5) **Magnesium** (Mg), essential for alloys for lightweight structures.
- 6) Platinum group metals: **ruthenium** (Ru), **palladium** (Pd), **platinum** (Pt), **rhodium** (Rh)
- 7) **Bismuth** (Bi)
- 8) **Boron** (B), essential for permanent magnets.
- 9) **Titanium metal** (Ti)
- 10) **Phosphorus** (P)
- 11) **Antimony** (Sb)
- 12) **Manganese** (Mn)
- 13) **Cobalt** (Co), essential for onboard batteries in battery-electric rolling stock, auxiliary energy-storage systems and permanent magnets.
- 14) **Beryllium** (Be)
- 15) **Tantalum** (Ta)
- 16) Light rare earth elements: **neodymium** (Nd), **samarium** (Sm), **lanthanum** (La), **praseodymium** (Pr), **cerium** (Ce). Essential for permanent magnets used in permanent-magnet traction motors (samarium-cobalt technology) for electric and battery trains.
- 17) **Arsenic** (As)
- 18) **Strontium** (Sr)
- 19) **Tungsten** (W): essential for high-performance mechanical components, braking systems and applications requiring durability and heat resistance.
- 20) **Gallium** (Ga)
- 21) **Graphite** (Gr): essential for pantograph strips and brake pads, onboard batteries in battery-electric rolling stock, auxiliary energy-storage systems and permanent magnets.
- 22) **Vanadium** (V)
- 23) **Lithium** (Li): essential for onboard batteries in battery-electric rolling stock, auxiliary energy-storage systems and permanent magnets.
- 24) **Germanium** (Ge)
- 25) **Niobium** (Nb)
- 26) Heavy rare earth elements: **yttrium** (Y), **gadolinium** (Gd), **erbium** (Er), **dysprosium** (Dy), **terbium** (Tb)
- 27) **Hafnium** (Hf)

2. Strategic dependency

Supply constraints may affect key resources as their availability declines, leading to higher sourcing costs and longer sourcing and production lead times. These constraints could undermine railway project timelines and, over time, affect the sector's ability to deploy, maintain, renew, and ensure asset reliability. For example, the [International Energy Agency anticipate a 30% copper supply deficit as early as 2030](#).

CRMs, as identified under the ECRM Act, are not the largest cost component of a train, but they are increasingly a **strategic dependency**. This matters even more because the rail supply industry uses small quantities of critical raw materials due to its size and project-based organisation compared with other industries (e.g. automotive). For this reason, **suppliers never prioritise it**.

A concrete example: graphite and the rail supply industry

The [LEADER 2030 \(*Learnings for European Autonomy to Deliver Europe's Rail in 2030*\)](#) project, funded under the Europe's Rail Joint Undertaking, illustrated how disruptions in seemingly upstream raw-material markets due to geopolitical tensions and military conflicts can quickly translate into tangible delays for rail manufacturers and operators.

The final report highlights a concrete example of graphite shortages, driven by rising demand from the defence industry, as materials are redirected from civilian to military uses. This has had direct consequences for rail supply chains, with shortages of inputs leading to a sharp increase in lead times for pantographs and certain locomotive components, from around 3 months before Russia's war of aggression against Ukraine, to 6 months in 2024 and approximately 9 months in 2025, resulting in delays of up to 12 months for the delivery of new or refurbished electric trains and locomotives.

The European Commission should **treat the situation as long-term**, given the increasing tendency to weaponise supply chains and the likelihood of involuntary supply chain shocks (natural disasters, geopolitical tensions, etc.). Therefore, if this ECRMC is created, the system must remain functional over the long term and support an ever-increasing number of CRMs.

3. Risks and opportunities

The European Commission considers these materials essential for strategic technologies and the green transition. At the same time, supply chains are **highly concentrated in a small number of countries, creating risks for European manufacturers**. Securing access to these materials is therefore becoming a **key competitiveness and risk-management issue**.

For the rail supply industry, this means:

1. **Higher supply-chain risk** and potential cost volatility for vehicle manufacturers and suppliers.
2. **Growing importance of recycling, circularity and material recovery** from end-of-life trains and components.
3. **Increased focus on supplier diversification and resilience**, in line with the CRMA objective that no more than 65% of a strategic raw material should come from a single third country.
4. **Potential opportunities for EU-based sourcing and strategic projects**, which could strengthen the competitiveness and security of supply for European rail manufacturers.

Regarding the revision of the European Critical Raw Materials Act (ECRMA)

UNIFE takes note of [the position of the European Parliament \(October 2026\)](#) and [the Council mandate \(March 2026\)](#) and suggests the following changes:

1. General remarks on the ECRMA

Elevate High-Level Governance Concerns:

UNIFE is highly critical of the proliferation of delegated acts, which leave essential methodologies, thresholds, and timelines to the Commission's later discretion, with limited industry consultation. The revision of the ECRMA is open before the delegated acts promised in the first version of the ECRMA are released, leaving potential issues unresolved.

Project-Based Proportionality:

In a project-based, low-volume, high-variance industry like rail, tracking materials at the component-, batch-, or serial-number level creates an excessive administrative burden with marginal sustainability gains.

Interoperability with Existing Frameworks:

CRMA reporting must be strictly harmonised with existing EU mechanisms, such as the Battery Regulation (and its Battery Passport), ESPR (and its DPP), REACH, RoHS, RMI, CSRD, and Full Material Declarations. **Compliance must follow the principle: “Report once — use multiple times”.**

Possible third-country restrictions:

Companies should not be exposed to legal liability for respecting a third-country law that might, e.g., impede a request for access to confidential information.

2. Rail supply industry inclusion in the ECRMA (and in the ECRMC)

The ECRMA must acknowledge the strategic importance of the rail supply industry. Yet, if rail is recognised as a strategic sector, resulting compliance duties must remain strictly proportionate, practicable, and limited to explicitly listed products and use cases. **The ECRMA should state that compliance duties must remain strictly confined to these explicitly listed components¹ and must not extend across broader rail vehicle structures, infrastructure, or signalling portfolios.**

¹ Article 24(1) explicitly identifies “traction motors” and “batteries for energy storage and e-mobility” as triggering risk assessments for large companies. Article 28(1) covers “electric motors, including where integrated into other products”, which serves as the direct gateway to Article 29 recycled-content requirements.¹

Companies should be able to select appropriate mitigation measures and be given realistic timelines for mitigation and verification. The Commission's power under Chapter 4 of ECRMA to define risk-mitigation measures should remain indicative and linked to clearly identified vulnerabilities.

3. Issues raised by Article 28 of ECRMA

The list of products subject to labelling requirements under Article 28 should not be expanded, as it is not an effective measure to increase recycling of critical raw materials.

Article 29(1) of the ECRMA provides that products containing permanent magnets are subject to the recycled-content disclosure requirements if *"the total weight of all such permanent magnets exceeds 0,2 kg"*. For the rail supply industry, this means the focus is primarily on larger applications, such as traction motors in rolling stock. However, **small permanent magnets below this threshold may still fall under the information and labelling requirements of Article 28, as no equivalent minimum threshold is foreseen there.**

For example, signalling products in the rail supply industry use a considerable number of small permanent magnets, often sourced through complex international supply chains. Collecting detailed information on the composition and origin of these components can be challenging and may require significant effort from suppliers.

While the rail supply industry fully supports the objectives of transparency, circularity and improved recyclability of permanent magnets, the associated information and labelling requirements should remain proportionate. For small permanent magnets weighing less than 0,2 kg, used in auxiliary motors, signalling equipment and similar applications, the administrative burden of collecting detailed information across the supply chain may outweigh the practical benefit.

Therefore, **UNIFE requests a *de minimis* threshold for the labelling and information requirements under Article 28, like the 0.2 kg threshold already applied under Article 29.**

4. Issues raised by Article 29 of ECRMA

In the Commission proposal to amend the ECRMA, released on 3 December 2025, Article 29(1) requires making *"publicly available on a free-access website the share of neodymium, dysprosium, praseodymium, terbium, boron, samarium, nickel and cobalt recovered from pre-consumer and post-consumer waste, including the shares of such waste produced within the Union, present in the permanent magnets incorporated in the product."*²

² UNIFE takes note of the proposed wording change [in the position of the European Parliament \(October 2026\)](#) and [the Council mandate \(March 2026\)](#) to replace *"pre-consumer"* with *"manufacturing waste"* (Parliament)

This information remains highly sensitive and would inform competitors, especially from hostile third countries, of the company's CRMs needs and technologies. UNIFE asks for **the removal of this requirement and no free access to this list, both on the company website and in the digital product passport**. Similarly, the CRMs volume should not be made available to the general audience in the Corporate Sustainability Reporting Directive (CSRD), which requires large companies to disclose highly confidential data on CRMs.

Article 29(2) states that the Commission needs to **adopt a delegated act** *"establishing rules for the calculation and verification of the share of neodymium, dysprosium, praseodymium, terbium, boron, samarium, nickel and cobalt recovered from pre-consumer and post-consumer waste, including the shares of such waste produced within the Union, present in the permanent magnets incorporated in the products"*.³ Yet **this calculation method remains unpublished, despite its importance**. In all cases, **a longer, realistic transition period (at least three years before the deadline) is needed given complex supply-chain traceability**. Otherwise, the rail supply industry cannot comply with this requirement. Moreover, **the Commission should respect the statutory timeline to prevent indefinite operational uncertainty**. In the revised ECRMA, the Commission added pre-consumer/manufacturing waste (i.e., waste generated during manufacturing) to the already mentioned post-consumer waste, including the shares of such waste produced in the EU.

Additionally, Article 29(3) requires *"minimum shares for neodymium, dysprosium, praseodymium, terbium, boron, samarium, nickel and cobalt recovered from post-consumer waste that must be present in the permanent magnet"* by 31 December 2031⁴. Yet, Europe currently has insufficient market supply of recycled content in permanent magnets, making it very difficult to include recycled content in new permanent magnets within this short timeframe. UNIFE calls on the European decision-makers to acknowledge that the European market lacks sufficient recycled heavy or light rare earths to meet the 2031 minimum thresholds.

and the addition of *"available on a free-access website or in its product passport, when available"* (Council). These two changes remain insufficient to tackle this confidentiality issue, as competitors could easily access this information. Article 46 (*Handling of confidential information*) is too vague and does not clarify how to *"ensure the protection of trade and business secrets and other sensitive, confidential and classified information obtained and processed in application of this Regulation"*.

³ UNIFE takes note of the proposed deadline extension to 31 December 2027 ([Council](#)) or 31 December 2026 ([Parliament](#)).

⁴ UNIFE regrets that the [Council](#) or the [Parliament](#) proposed no deadline extension.

Regarding the establishment of the European Critical Raw Material Centre (ECRMC)

UNIFE takes note of [the European Parliament's position approved on 20 October 2026](#). Based on this initial position, UNIFE supports establishing a *Critical Raw Materials Forum* as a platform for dialogue and the exchange of views, enabling the voices of industry representatives, including downstream stakeholders, to be heard. UNIFE suggests considering the following points when establishing the ECRMC:

1. Joint purchasing and demand aggregation

The ECRMC should help facilitate joint purchasing operations, complementing the initial demand matching carried out under the *Raw Material Mechanism* launched in April 2026.

The ECRMC could act as an intermediary with raw material providers and a facilitator of demand pooling for companies that are interested in joint procurement on a voluntary basis. In addition to the centre's supportive activities, joint procurement should be eased by **clarifying the applicable legal framework**, for instance through guidelines issued by DG COMP on targeted derogations from the cartel prohibition for this purpose.

Rail projects and contracts are often funded by public spending, with 90% of contracts awarded through public procurement. By improving access to secondary raw materials and recycled streams for the rail supply industry, the ECRMC could contribute to circular public procurement and reduce acquisition and lifecycle costs of publicly funded rail assets.

2. Strategic stockpiling

The ECRMC could play a useful role in the strategic stockpiling of critical raw materials and, more specifically, in ensuring that the rail supply industry is not forgotten. Strategic stockpiling should be understood primarily as a response to short-term or emergency shortages, such as severe supply disruptions that could result from a geopolitical crisis and/or unilateral restrictive measures by a trading partner, such as export controls. Secondly, it can also address structural issues, such as price stabilisation, through a timely partial release or increase in strategic stocks.

The EU should also assign operational tasks for strategic stockpiling to the ECRMC, with support from Member States.

3. Market intelligence

According to the Parliament's position, the ECRMC would undertake further market intelligence activities to establish an EU-level "**Intelligence Hub**" on the evolution of critical raw material markets. This would require thorough data pooling with other Commission services and EU agencies, Member States' competent authorities, and industry.

Industry associations and individual companies should cooperate effectively with the ECRMC by transmitting key information needed to conduct market analysis and to fulfil the operational missions assigned to the centre. **Such cooperation should be based on three premises:**

First, the CRMA already imposes numerous reporting obligations, either directly on large companies (Article 24) or through information-transmission obligations imposed on Member States, which are bound to seek these data from industry. It would **not be convenient to accompany the establishment of the ECRMC with additional legal obligations in this field.**

Second, **data requests should remain proportionate to the ECRMC's objectives.**

Thirdly, data sharing with the ECRMC should be accompanied by **confidentiality in transmission channels and in the handling of information at EU level.** This implies a generalised use of encryption and the adoption of stringent data security protocols. Currently, confidentiality is framed solely around IT security and encryption. However, securely transmitted data can still be aggregated or shared in ways that allow competitors to reverse-engineer proprietary sourcing volumes, supplier dependencies, or technological roadmaps. UNIFE requests that the **ECRMC framework guarantee substantive protection of trade secrets and confidential business information (CBI)**, ensuring that any market intelligence reporting or pooling remains strictly anonymised and aggregated to prevent individual reverse-engineering.

4. Governance issues

In establishing the ECRMC and developing its missions, the Commission should first **draw on the experience of raw material agencies set up by third countries** such as Japan or South Korea to overcome export restrictions, pilot strategic stockpiling and foster supply diversification through domestic or overseas extraction/reefing projects.

More generally, the ECRMC is expected to interact extensively with EU industry on its core tasks: financial support for strategic projects, demand aggregation and joint purchasing, strategic stockpiling, and market intelligence. It is crucial to **ensure direct involvement of industry representatives (including downstream users) in its governance** through the proposed *Critical Raw Materials Forum*.



In addition, the ECRMC's operating rules should endow it with a clear mandate to **coordinate the actions of the different directorates-general** or equivalent services within or interacting with the centre's field of activities (DG GROW, DG TRADE, DG DEFIS, etc.). The centre would also align its approach with other EU agencies or international organisations pursuing similar activities on critical raw materials, in particular EDA (European Defence Agency), ESA (European Space Agency) and NATO agencies.

About UNIFE

UNIFE, the *European Rail Supply Industry Association*, has operated in Brussels since 1992, representing European train builders and rail equipment suppliers. The association advocates for more than 120 of Europe's leading rail supply companies – from SMEs to major industrial champions – active in designing, manufacturing, maintaining and refurbishing rail transport systems (trains, metros, trams, freight wagons), subsystems and related equipment. UNIFE also brings together national rail industry associations from 13 European countries.