UNIFE RoHS factsheet

October 2026

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.

The Chemical Risks Topical Group (CR TG) leads UNIFE's policy on the management of chemicals and hazardous substances at the global and European levels, including the *European Chemicals Agency* (ECHA) activities, but not limited to them. It focuses on batteries, F-Gases (fluorinated gases), OHS (occupational health and safety), PFAS (Per- and polyfluoroalkyl substances), REACH (Registration, Evaluation, Authorisation and restriction of Chemicals), RoHS (Restriction of Hazardous Substances), SCIP (substances of concern in products), and WEEE (waste electrical and electronic equipment). It updates the Rail Industry Substance List (RISL), the UNIFE Material and Substance Declaration Template and Product-Related Chemicals Regulations.

The information in this document is for reference only and may not be up to date or accurate. UNIFE does not guarantee its completeness or reliability. This document should not be used as definitive proof or relied upon for legal purposes. The information may become obsolete over time. Please consult a professional if needed. UNIFE is not responsible for any actions taken based on this document.

About the RoHS legislation

This UNIFE factsheet sets out the extent to which products from the rail supply industry come within the scope of ***Directive 2011/65/EU "Restriction of the use of certain Hazardous Substances in electrical and electronic equipment" (RoHS)*****.**

This Directive aims to preserve, protect and improve the quality of the environment by regulating the content of certain hazardous substances in **electrical and electronic equipment** (EEE).

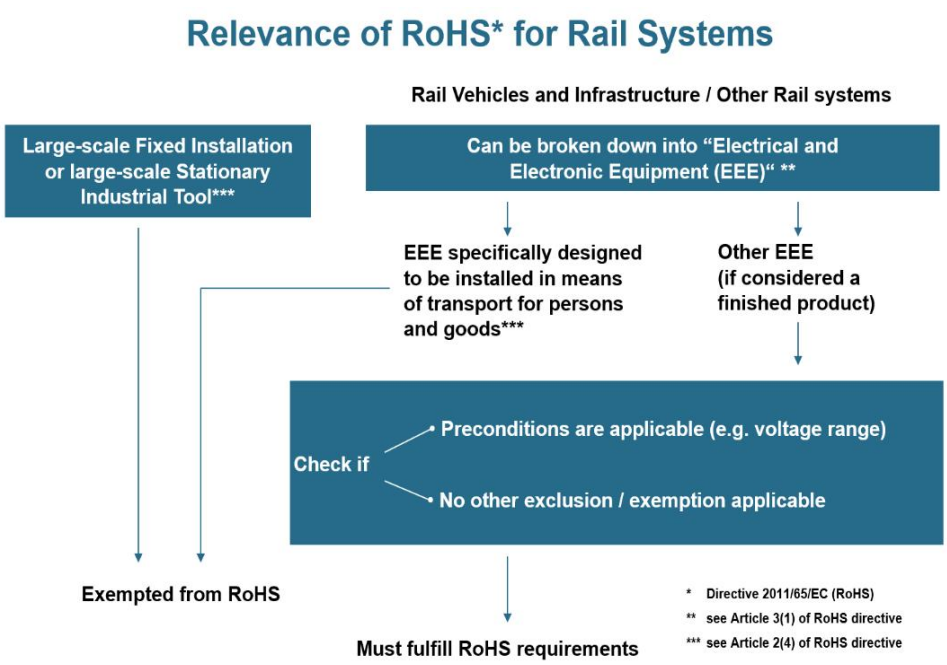
RoHS Directive 2011/65/EU restricts the use of lead (Pb), cadmium (Cd), mercury (Hg), hexavalent chromium (Cr(VI)), polybrominated biphenyls (PBBs), polybrominated diphenyl ethers (PBDEs), in the homogeneous material of EEE placed on the market after 1 July 2006. For EEE falling under category 11, the restrictions apply to EEE placed on the market from 22 July 2019[1]. Delegated Directive 2015/863/EU further restricts the use of bis(2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DBP) and diisobutyl phthalate (DIBP) in the homogeneous material of EEE placed on the market from 22 July 2019. The restrictions on DEHP, BBP, DBP, DIBP do not apply to cables or spare parts used for the repair, reuse, updating of functionalities, or upgrading of capacity of EEE placed on the market before 22 July 2019.

EEE falls within the scope of the RoHS Directive when it is designed for use with a voltage rating not exceeding 1000 V AC (alternating current) or 1500 V DC (direct current). EEE also falls within one of the categories listed in the table on the left-hand side (see below) and is not covered by an explicit exclusion or exemption. Common implementation requirements include the following:

- producers mark their EEE in the country where it is placed on the market, allowing its identification,
- provide an EU declaration of conformity, and
- affix the CE marking visibly, legibly and indelibly to the finished EEE or to its data plate.

[1] There is a specific transition date of 22 July 2021 for medical devices and monitoring and control instruments, including industrial monitoring and control instruments, as provided by Directive (EU) 2015/863.

1. Large household appliances
2. Small household appliances
3. IT and telecommunications equipment
4. Consumer equipment
5. Lighting equipment
6. Electrical and electronic tools
7. Toys, leisure and sports equipment
8. Medical devices
9. Monitoring and control instruments, including industrial monitoring and control instruments
10. Automatic dispensers
11. Other EEE not covered by any of the categories above



UNIFE understanding

The UNIFE understanding is that:

- EEE, or EEE in items specifically designed for rolling stock or rail infrastructure (including different rolling stock categories, onboard and trackside subsystems, as well as signalling, control and command systems, and others) or intended to be part of a large-scale fixed installation or a large-scale stationary industrial tool, **does not fall within the scope of the RoHS Directive**. Rolling stock can directly fall under the exclusion for means of transport under Article 2(4)(f), while rail infrastructure does not appear to be a standalone exclusion. For infrastructure equipment, assess the applicable exclusion case by case, e.g., under Article 2(4)(c) for large-scale fixed installations or large-scale stationary industrial tools.
- Cables or spare parts used for repair, reuse, updating of functionalities or upgrading of capacity of rolling stock or rail infrastructure, or of a part of a large-scale fixed installation or a large-scale stationary industrial tool, especially systems put on the market before 22 July 2019,[2] **do not fall within the scope of the RoHS Directive**.

[2] Reference to Directive 2011/65/EU Article 4(4) (ea): "*Cables or spare parts for the repair, the reuse [...] [of] all other EEE that was outside the scope of the Directive 2002/95/EC and which is placed on the market before 22 July 2019*".

- EEE for test and service that is specially designed and necessary for rail systems and is an integral part of rolling stock or rail infrastructure, or of a large-scale stationary industrial tool or a large-scale fixed installation, **does not fall within the scope of the RoHS Directive**.
- EEE for test and service that is specially designed and necessary for rail systems but is not integrated into rolling stock or rail infrastructure **falls within the scope of the RoHS Directive**.

UNIFE member companies request that EEE suppliers, in addition to maintaining safety and quality standards, fulfil legal obligations regarding the supplied EEE.
The majority of equipment for the Rail Industry is not within the scope of RoHS, as it falls under one (or more) of the following exclusions for EEE specifically designed for, or intended to be part of:

- means of transport for persons and goods,
- large-scale fixed installations,
- large-scale stationary industrial tools.[3]

This means RoHS applies to rolling stock or rail infrastructure only for a few products that fall within one of the 11 RoHS categories, are not excluded (see the list above), and can operate independently of rolling stock or infrastructure. Examples of equipment used in rail applications that fall within the scope of RoHS are typically portable items not specifically designed for rail applications, such as:

- Laptop computers,
- Computer screens,
- Keyboards,
- Mobile phones,
- Handheld equipment, such as installation, test and maintenance tools,
- Some of the kitchen equipment in bistro wagons.

[3] Article 2(4)(c): where applicable, for equipment specifically designed to be installed as part of equipment that is excluded from, or outside, the scope of RoHS.

Exemptions

Even when equipment falls within the scope of the RoHS Directive, applicable exemptions must be carefully reviewed. A component must fully comply with RoHS requirements only if it falls within one of the RoHS product categories and no applicable exemption applies.

Industry Commitment

UNIFE members have gone beyond legal obligations and developed a hazardous substances limitation strategy that already covered hazardous substances controlled by the RoHS Directive before RoHS came into force. UNIFE harmonises these voluntary limitation actions and corresponding strategies across the rail sector.

Regarding lead in soldering, the transition to lead-free soldering is complex, and there are many ways to achieve this technological shift. In safety-critical applications, UNIFE member companies will introduce new technologies carefully, taking into account the high reliability and safety requirements.

Definitions mentioned in Article 3 of the RoHS Directive

- "**Electrical and Electronic Equipment**" means equipment which is dependent on electric currents or electromagnetic fields to work properly and equipment for the generation, transfer and measurement of such currents and fields and designed for use with a voltage rating not exceeding 1000 volts for alternating current and 1500 volts for direct current.
- "**Homogeneous Material**" means either one material of uniform composition throughout or a material, consisting of a combination of materials, that cannot be mechanically disjointed into different materials, meaning that the materials cannot be separated by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes.
- "**Large-scale Stationary Industrial Tools**" means a large-size assembly of machines, equipment, and/or components, functioning together for a specific application, permanently installed and de-installed by professionals at a given place, and used and maintained by professionals in an industrial manufacturing facility or research and development facility.

- "**Large-scale Fixed Installation**" means a large-sized combination of several types of apparatus and, where applicable, other devices, which are assembled, installed by professionals and intended to be used permanently in a pre-defined and dedicated location, and to be de-installed by professionals.