

September 2024

## Guidance on the definition of a Battery and its implications

### I. Introduction

In the context of the Batteries Regulation EU 1542/2023 and its implementation, multiple requirements apply to batteries.

These requirements are essentially described in the following sections of the Regulation: **Sustainability and safety requirements** (in Chapter II), **Labelling, marking and information requirements** (in Chapter III), **Conformity of batteries** (in Chapter IV), **Obligations of economic operators (...)** (in Chapter VI), **Due diligence policies** (in Chapter VII), **Digital Battery Passport** (in Chapter IX).

Meeting these requirements is the duty of economic operators, amongst which the 'Manufacturer' (as defined in the Regulation) is a key player.

Further obligations regarding the **Management of waste batteries** (in Chapter VIII) fall under the responsibility of the 'Producer'<sup>1</sup>.

To properly implement these requirements, it is necessary to identify those objects which meet the battery definition, as these are the ones on which the above requirements are directly applicable. One needs to distinguish them from objects that do not meet the battery definition, which hence are not directly regulated by Regulation 1542/2023.

### II. High level definition: a device delivering electrical energy

Please note **definition 3.1(1)** below :

**Article 3.1 (1):** 'battery' means any device **delivering electrical energy** generated by direct conversion of chemical energy, having internal or external storage, and consisting of one or more non-rechargeable or rechargeable battery cells, modules or of packs of them, and includes a battery that has been subject to preparation for re-use, preparation for repurposing, repurposing or remanufacturing,

The Regulation makes it clear that a battery shall at least be able to deliver energy (generated by direct conversion of chemical energy). The question which immediately stems from this definition is the level of readiness that the product must achieve to qualify as a battery.

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<sup>1</sup> Please refer to the March 2024 "Inter Association Guidance on the identification of the Producer in several representative scenarios", jointly issued by EUROBAT, RECHARGE and EPBA, and available on their respective websites.

In other words, does a single cell, as produced by a manufacturing line, devoid of the relevant connecting, charging, monitoring and cooling apparatus, with electrical characteristics (voltage, amperage ...) that are unable to meet application requirements, meet the definition of a battery? The paragraphs below provide guidance on how to answer this question..

### III. A complete unit ready for use by end users is a battery

Please note **recital 13** below in coordination with **definition 3.1(2)** below:

**Recital 13:** Products [a] placed on the market as battery packs, which are batteries or groups of cells that are connected or encapsulated within an outer casing to form a complete unit ready for use by end-users or in applications that the end-user is not intended to split up or open and which conform to the definition of batteries, or [b] battery cells that conform to the definition of batteries, should be subject to requirements applicable to batteries.

**Article 3.1 (2):** 'battery pack' means any set of battery cells or modules that are connected together or encapsulated within an outer casing, to form a complete unit which is not meant to be split up or opened by the end-user;

Statement [a] of recital 13, in coordination with definition 3.1(2) above, makes it clear that it is 'a complete unit, consisting of groups of cells connected or encapsulated, ready for end use by end users', that forms a battery [pack]. The pack definition further adds the criteria of 'not meant to be split up or opened by the end user'.

### IV. A cell available for end use, without any further incorporation into a larger (battery) pack, is a battery

Please note **recital 13** above in coordination with **article 1(4)** below:

**Article 1(4):** In cases where battery cells or battery modules are made available on the market for end use, without any further incorporation or assembly into larger battery packs or batteries, they shall be considered to have been placed on the market as batteries for the purposes of this Regulation, and the requirements for the most similar battery category shall apply. In cases where it can be considered that such battery cells or battery modules fall under more than one battery category, they shall be deemed to fall under the category to which the strictest requirements apply.

Statement [b] of recital 13, in coordination with article 1(4) above, further clarifies that cells which do not need to be further connected or incorporated to form a complete unit ready for use by end users (in other words in situation where the cell as such is already a complete unit ready for use by an end user) meet the definition of batteries.

This clarification applies to cells supplied to end users as well as to appliance manufacturers, as long as they do not have to be further connected or incorporated to form a complete unit.

## V. Cells (and modules) that are supplied to a (battery) Manufacturer are not batteries

Please note **article 39** below:

**Article 39:** Obligations of suppliers of battery cells and battery modules:

**Suppliers of battery cells and battery modules shall provide the information** and documentation necessary to comply with the requirements of this Regulation **when supplying battery cells or modules to a manufacturer**. That information and documentation shall be provided free of charge.

This article establishes the obligation for battery cell and module (components) makers to provide free of charge the information to battery manufacturers to ensure the latter are in a position to comply with the requirements applicable to batteries.

This provides further assurance that cells (and modules) that are to be connected or encapsulated by a [battery] Manufacturer within an outer casing to form a complete unit ready for use by end-users, are not batteries, and hence the requirements of Chapter II, Chapter III, Chapter IV, Chapter VI, Chapter VII and Chapter IX are not directly applicable to them.

## VI. DIY battery kits that can be made ready with commonly available tools are batteries

Please note recital 14 below:

**Recital 14:** **Batteries that can be made ready for use by the end-user with commonly available tools by using a ‘Do It Yourself’ kit, should be considered to be batteries** for the purposes of this Regulation. The economic operator placing such kits on the market should be subject to this Regulation.



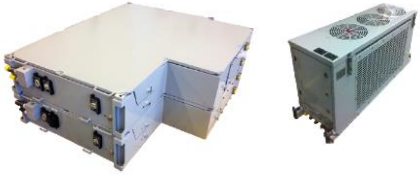

Such DIY objects are indeed batteries and entities that place on the market such units are to ensure they comply with requirements applicable to batteries.

# Classification of several cells, modules and batteries

## VII. Some products are always batteries

Certain products are placed on the market fully connected or encapsulated within an outer casing to form a complete unit ready for use by end users. These include items made of multiples battery cells or modules, as clarified in recital 13.

*Figure 1 – Examples<sup>2</sup> of products that are always batteries*

<p>a) 12 V Lead-based SLI battery for passenger cars</p>	
<p>b) 8 kWh EV battery pack for commercial vehicles (includes a BMS)</p>	
<p>c) 24 V lead-based industrial battery to power fork-lift trucks</p>	
<p>d) Li-ion industrial battery for regenerative rail hybrid traction with its dedicated BTMS(*) module</p> <p>(*) BTMS: Battery Thermal Management System</p>	
<p>e) Portable battery pack for a household equipment</p>	
<p>f) Industrial stationary battery energy storage system (+)</p> <p>(+): The battery system includes Fire Suppression System (FSS) and HVAC which are necessary for safety and durability</p>	

<sup>2</sup> The examples provided are not exhaustive.

Due to their legal status as batteries, the regulatory requirements of Chapter II (Sustainability & Safety), Chapter III (Labelling & Marking), Chapter IV (Conformity), Chapter VI (Obligations of economic operators...), Chapter VII (Due diligence policies), Chapter IX (Digital Battery Passport) apply to these products.

### VIII. Some products are never batteries

Some products are designed to be interconnected (and encapsulated) into larger systems and are never used as stand-alone units. Although some of them may be able to deliver energy, they are not batteries (and are hence considered as battery components).

Cells designed to be assembled into stationary batteries (typically to provide back-up power) or to be incorporated into modules or packs for electromobility (typically EV or LMT batteries) or for traction (typically for forklift trucks) fall into this category.

Similarly, Li-ion modules, which are assemblies of cells designed to work together, and are intended for further integration before they become part of a functional battery system, are not batteries. Moreover, these products (which are typically not fitted with a BMS) are unable to deliver energy.

Furthermore, these products are not supplied as “Do It Yourself” kits and ‘cannot be made ready for use by the end-user with commonly available tools’.

In the case of industrial stationary applications, installation, commissioning, and start-up requires specialized qualified electricians and may additionally require the use of a general contractor, hence the parts that need to be assembled shall be considered components and not batteries.



In similar industrial traction application, battery components are integrated into a battery within the equipment by the OEM<sup>3</sup>, with specialized tools and training.

*Figure 2 – Examples<sup>4</sup> for products that are never batteries because they are always connected or encapsulated to form a complete unit before being placed on the market for end use.*

<p>a) Industrial prismatic, cylindrical or pouch cells (Ni-Cd, Lead/acid or Li-ion)</p>	
<p>b) Portable cell assembly</p>	

<sup>3</sup> OEM : Original Equipment Manufacturer - an organization that makes appliance or equipment from component parts bought from other organizations.

<sup>4</sup> The examples provided are not exhaustive.




<p>c) individual EV modules (without a BMS), to be incorporated into a battery (with a single common BMS) within an EV</p>	
<p>d) Industrial Lead/acid 2V cell (“flooded” and “VRLA”)</p>	

These parts which do not qualify as batteries do not have to directly comply with the regulatory requirements that apply to batteries, but are covered by specific obligations, particularly concerning the supply of information, as mandated by article 39.

## IX. Some products may or may not be batteries, depending on their intended use

These are products which can in some instances be made available on the market for end use “as such”, and which in other instances must first be “connected or encapsulated to form a complete unit [so as to be] ready for use by an end user”.

*Figure 3 – Examples<sup>5</sup> of products that can both be supplied “without further incorporation or assembly” or which have “to be connected or encapsulated to form a complete unit ready for use by an end user”.*

<p>a) Portable rechargeable single cell (such as Ni-MH cells)</p>	
<p>b) Industrial non-rechargeable single cell (such as lithium cells)</p>	
<p>c) Industrial 12V Lead-based module</p>	

<sup>5</sup> The examples provided are not exhaustive.

Under some circumstances, these products qualify as batteries, so in these instances requirements that apply to batteries will apply to them, including but not limited to Chapter II (Sustainability & Safety), Chapter III (Labelling & Marking), Chapter IV (Conformity), Chapter VI (Obligations of economic operators...), Chapter VII (Due diligence policies) and Chapter IX (Digital Battery Passport).

#### About EUROBAT

[www.eurobat.org](http://www.eurobat.org)

EUROBAT is the association of the European Manufacturers of automotive, industrial and energy storage batteries. EUROBAT represents more than 90% of the automotive and industrial battery industry in Europe through its more than 50 members from across the continent. EUROBAT members and secretariat work with all stakeholders, such as battery users, governmental organizations and media, to develop new battery solutions in areas of hybrid and electro-mobility as well as grid flexibility and renewable energy storage.

#### About EPBA

[www.epbaeurope.net](http://www.epbaeurope.net)

EPBA is the leading organization representing quality Manufacturers of portable power solutions, working with stakeholders to safeguard and enhance our positive contribution to the EU economy, the environment, and the communities in which we operate.

#### About RECHARGE

[www.rechargebatteries.org](http://www.rechargebatteries.org)

RECHARGE is Europe's industry association for advanced rechargeable and lithium batteries, representing a 360° value chain poised to tackle today's & tomorrow's challenges. RECHARGE's unique membership covers all aspects of the advanced rechargeable battery value chain: from suppliers of primary and secondary raw materials to battery and original equipment Manufacturers (OEMs), including logistics partners and battery recyclers.

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