Available Product Category Rules (PCRs) and Product Environmental Footprint Category Rules (PEFCRs) for LCA studies

Guideline 3 in the CSIR's LCA Guideline Series

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1 Introduction

This Guideline forms part of the **CSIR's Life Cycle Assessment (LCA) Guideline series.**

Guideline 1 is the main guideline, providing information on how to conduct an LCA study in the South African context, while *Guideline 2* provides a list of applicable LCA standards.

This accompanying guideline, **Guideline 3**, provides a comprehensive, yet non-exhaustive list of Product Category Rules (PCRs) and Product Environmental Footprint Category Rules (PEFCRs) which may be of relevance for conducting LCA studies in South Africa, particularly in the context of the Extended Producer Responsibility (EPR) Regulations and Notices (DFFE, 2020).

Regulation 5, sub-regulations (1)(k) and (1)(l) of the EPR Regulations require that producers of identified products must "*conduct a life cycle assessment, in relation to the identified product, in accordance with the applicable standards within 5 years of implementation of their extended producer responsibility scheme*". To date, identified products have been listed in six notices accompanying the Regulations. In this Guideline, we list available PCRs and PEFCRs that may be of relevance to these identified products.

2 Definitions: EPDs, PCRs and PEFCRs

Environmental Product Declarations (EPD) or **Type III environmental declarations** (ISO 14025: 2006) aim at providing quantified and third-party verified environmental data using predetermined parameters; and, where relevant, additional environmental information.

EPDs are produced based on LCA calculations (following ISO 14025; see *Guideline 2*), and provide a quantitative basis for comparison of products (goods or services). In addition, an EPD must be produced according to a specific set of Product Category Rules (PCRs) (see below), which provide calculation rules and guidelines to ensure all EPDs under the same product category report the same type of information. EPDs have a 5-year validity.

In practical terms, an EPD consists of two key documents:

- The underlying LCA report, a systematic and comprehensive summary of the LCA study to support the third-party verifier when verifying the EPD. This report is not part of the public communication.
- The public EPD document, which provides the LCA results and other EPD content as per ISO 14025.

Since EPDs are voluntary declarations of the life-cycle environmental impact, having an EPD for a product does not necessarily allow comparison with alternatives (the EPD only reports on the environmental performance of the specific product assessed; not of alternatives). However, since an

EPD is a third-party verified document, which gives the information credibility, it is suitable for procurement purposes.

Product Category Rules (PCRs) are a "*set of specific rules, requirements and guidelines for developing Type III environmental declarations for one or more product category*" (ISO 14025:2006). A **product category** is a "*group of products that can fulfil equivalent functions*" (ISO 14025:2006). The aim of PCRs is to achieve comparability in results between different producers of the same product.

ISO 14025 is based on ISO 14040/44 (see *Guideline 2*), and deals with Type III environmental declarations, which have quantified environmental information on the life cycle of a product, to enable product comparisons. ISO14025 introduces PCRs, which are specific guidelines for the calculation of the environmental impact of products with similar characteristics. Their development follows the ISO/TS 14027 standard (see *Guideline 2*).

PCRs are subject to the administration of program operators. Examples of program operators are Environdec (located in Sweden, with an international focus), PlasticsEurope (the Association of Plastics Manufacturers in Europe), Institut Bauen und Umwelt (Germany), EPD-norge (Norway), UL Environment (United States) and JEMAI (Japan).

Product Environmental Footprint (PEF) – and **Organisation Environmental Footprint (OEF)** – are LCA-based methods to measure and communicate the potential life cycle environmental impact of products (goods or services) and organisations, respectively. Together they form the basis for the *EU Environmental Footprint.* Like Environmental Product Declarations, PEFs can follow product/sector-specific **Product Environmental Footprint Category Rules (PEFCRs),** which have been developed for certain products, in collaboration with sector stakeholders.

3 Available PCRs and PEFCRs relevant to the products identified in the notices to the EPR regulations in South Africa

The international Environmental Product Declaration (EPD) system has a repository for both PCRs and EPDs (PCR Library | EPD International (environdec.com)). This repository is fairly comprehensive and is constantly updated and improved; however, it should not be considered exhaustive of all the possible EPDs and PCRs that have been created globally. When conducting an LCA study to inform an EPD, a relevant PCR must be used as guidance on how to conduct the study so as to be compliant with the ISO 14025 type III standard (see *Guideline 2*).

The EU Product Environmental Footprint (PEF) system has also created, and constantly improves and expands, its own set of PCRs; in this case called Product Environmental Footprint Category Rules (PEFCRs) (Single Market for Green Products - The Product Environmental Footprint Pilots - Environment - European Commission (europa.eu)). When conducting a PEF calculation, which is inherently an LCA study, a relevant PEFCR can be used as guidance on how to conduct the study so as to be compliant with the PEF methodology.

UL Solutions, a program operator functioning under ISO 14025, is also a provider of PCRs (Product Category Rules (PCRs) | UL Solutions), but these mainly refer to building related products and services.

Similarly, ASTM International has published PCRs, with a strong focus on the construction sector (PCRs & EPDs - Environmental Product Declarations - Certification - Products & Services (astm.org)).

EPD Norge provides a series of EPDs which have been compiled, some of which are related to the packaging sector (Packaging - EPD Norway (epd-norge.no)).

Finally, the American Centre for Life Cycle Assessment (ACLCA) (PCR - ACLCA) offers guidance, tools and support to create standardized, consistent, and reliable PCRs & EPDs for transparency, procurement, and supply chain data (North America focus).

Table 1 provides an excerpt from relevant repositories describing available **Product Category Rules** which may be or relevance to some of the products identified in the notices to the EPR Regulations in South Africa. The list provided is not exhaustive, but provides examples of potentially relevant PCR's available at the time of writing (November 2024).

For potentially relevant **PEFCRs** under the EU PEF system, which are periodically updated, readers are referred to the PEF website at https://green-business.ec.europa.eu/environmental-footprint-methods/pef-method_en for the most up-to-date information.

Table 1: List of available Product Category Rules (PCRs) of relevance to the products identified in the EPR notices

Type	Name and Link	Product category/group	Product(s)
Paper, Packaging and Single Use Products Definition in the EPR Regulations: "packaging° means any material, container or wrapping or corrugated cases, used for the containment, transport, handling, protection, promotion, marketing or sale of any product or substance, which may be primary packaging, containing the actual product or secondary packaging or tertiary packaging, typically containing products already packaged in primary packaging, but exclude: (a) shipping containers used solely for the transportation of any consumer commodity in bulk to manufacturers, packers, or processors, or to wholesale or retail distributors thereof; (b) packaging made of timber and textile; and (c) plastic pallets and industrial bulk containers with a capacity exceeding 1000 litres. Other definitions: "biodegradable plastic" means plastic, produced from either renewable materials or fossil fuels that are degradable due to the action of micro - organisms and enzymes in the presence of oxygen which convert the organic material into carbon dioxide, mineral salts, water and new biomass, or in the absence of oxygen to carbon dioxide, methane, mineral salts and biomass to a specific extent within a given time; " compostable plastic" means plastic that undergoes degradation by biological processes during composting to yield Carbon dioxide, water, inorganic compounds and biomass at a rate consistent with other known compostable materials and leave no visible, distinguishable or toxic residue (ISO 14088); "paper" means any substance made from wood pulp, rags, straw, or other fibrous material used for writing, printing, or as a wrapping material; "single -use plastics" means disposable plastics (petrochemicals, compostable & biodegradable), that are commonly used for plastic packaging and include items intended to be used only once before they are thrown away or recycled including but not limited to food packaging, bottles, straws, containers, tubs, cups and cutlery. Section 4(1) of the Notices on Paper, Packaging and Single Use Products details the product or class of products to which the EPR applies.			
PCR	Plastic in primary form (being update, release date 2023-06-12)	PCR 2010:16 Plastic in primary forms	This document provides Product Category Rules (PCR) for the assessment of the environmental performance of Plastic in primary and the declaration of this performance by an EPD. The

Type	Name and Link	Product category/group	Product(s)
			product category corresponds to UN CPC -Group 347 Plastics in primary forms, which refers to the following: • Polymer of ethylene, in primary forms (CPC 3471) • Polymers of styrene, in primary forms (CPC 3472) • Polymer of vinyl chloride or other halogenated olefins, in primary forms (CPC 3473) • Polyacetals, other polyethers and epoxide resins, in primary forms; polycarbonates, alkyd resins, polyallys esters and other polyester in primary form (CPC 3474) • Other plastic in primary form; ion exchange (CPC 3479)
PCR	Bottled water, not sweetened, or flavoured	PCR 2010:11 Bottled waters, not sweetened or flavoured	This document provides Product Category Rules (PCR) for the assessment of the environmental performance of UN CPC 24410 (Bottled waters, not sweetened or flavoured) and the declaration of this performance by an EPD.
PCR	Closable flexible plastic packaging	PCR 2017:05 Closable flexible plastic packaging Other articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics.	This document provides Product Category Rules (PCR) for the assessment of the environmental performance of Closable flexible plastic packaging corresponding to a sub-section of UN CPC 36490 Other articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics and the declaration of this performance by an EPD.
PCR	Corrugated paper and paperboard	PCR 2013:07 Corrugated paper and paperboard *Note: This PCR expired 2021-08-11, but has been replaced by PCR 2010:14 Processed paper and paperboard, which as of 2022-07-06 has an expanded scope including UN CPC 32151 (Corrugated paper and paperboard).*	This document provides Product Category Rules (PCR) for the assessment of the environmental performance of UN CPC 32151 (Corrugated Paper and Paperboard), and the declaration of this performance by an EPD. The CPD code 32151 is described as corrugated paper and paperboard. It belongs to the code group CPC 3215: Corrugated paper and paperboard and container of paper and paperboard.
PCR	Processed paper and	PCR 2010:14 Processed paper and	This document provides Product Category Rules (PCR) for the

Type	Name and Link	Product category/group	Product(s)
	paperboard	paperboard (3.1)	assessment of the environmental performance of processed paper and paperboard (including corrugated paper and paperboard), and the declaration of this performance by an EPD. The product category corresponds to UN CPC class 3214 (Processed paper and paperboard) and its sub-classes, as well as sub-class 32151 (Corrugated paper and paperboard), as defined in the UN CPC system (included classes in bold): **Class 3214: Processed paper and paperboard** • Sub-class 32141 - Composite paper and paperboard, not surface-coated or impregnated • Sub-class 32143 - Paper and paperboard coated with kaolin or with other inorganic substances • Sub-class 32142 - Paper and paperboard, creped, crinkled, embossed or perforated n.e.c. • Sub-class 32149 - Other paper and paperboard, cellulose wadding and webs of cellulose fibres, coated, impregnated, gummed or adhesive, covered, surface-coloured, surface decorated or printed, in rolls or sheets This document provides Product Category Rules (PCR) for the assessment of the environmental performance of processed paper and paperboard (including corrugated paper and paperboard), and the declaration of this performance by an EPD. The product category corresponds to UN CPC class 3214 (Processed paper and paperboard) and its sub-classes, as well as sub-class 32151 (Corrugated paper and paperboard), as defined in the UN CPC system (included classes in bold):

Type	Name and Link	Product category/group	Product(s)
			Class 3214: Processed paper and paperboard • Sub-class 32141 - Composite paper and paperboard, not surface-coated or impregnated • Sub-class 32143 - Paper and paperboard coated with kaolin or with other inorganic substances • Sub-class 32142 - Paper and paperboard, creped, crinkled, embossed or perforated n.e.c. • Sub-class 32149 - Other paper and paperboard, cellulose wadding and webs of cellulose fibres, coated, impregnated, gummed or adhesive, covered, surface-coloured, surface decorated or printed, in rolls or sheets Class 3215: Sub-class 3215 Corrugated paper and paperboard and containers of paper and paperboard • Sub-class 32151 Corrugated paper and paperboard The scope of this PCR was expanded as of version 3.1, published 2022-07-06, by the inclusion of UN CPC 32151, which was previously covered by PCR 2013:07 Corrugated paper and paperboard (expired 2021-08-11). Note that an EPD based on PCR 2013:08 shall not be compared with an EPD based on the present PCR. This document provides Product Category Rules (PCR) for the assessment of the environmental performance of processed paper and paperboard (including corrugated paper and paperboard), and the declaration of this performance by an EPD. The product category corresponds to UN CPC class 3214 (Processed paper and paperboard) and its sub-classes, as well as

Type	Name and Link	Product category/group	Product(s)
			sub-class 32151 (Corrugated paper and paperboard), as defined in the UN CPC system (included classes in bold): Class 3214: Processed paper and paperboard • Sub-class 32141 - Composite paper and paperboard, not surface-coated or impregnated • Sub-class 32143 - Paper and paperboard coated with kaolin or with other inorganic substances • Sub-class 32142 - Paper and paperboard, creped, crinkled, embossed or perforated n.e.c. • Sub-class 32149 - Other paper and paperboard, cellulose wadding and webs of cellulose fibres, coated, impregnated, gummed or adhesive, covered, surface-coloured, surface decorated or printed, in rolls or sheets Class 3215: Sub-class 3215 Corrugated paper and paperboard and containers of paper and paperboard • Sub-class 32151 Corrugated paper and paperboard The scope of this PCR was expanded as of version 3.1, published 2022-07-06, by the inclusion of UN CPC 32151, which was previously covered by PCR 2013:07 Corrugated paper and paperboard (expired 2021-08-11). Note that an EPD based on PCR 2013:08 shall not be compared with an EPD based on the present PCR. • Sub-class 32151 Corrugated paper and paperboard The scope of this PCR was expanded as of version 3.1, published 2022-07-06, by the inclusion of UN CPC 32151, which was

Type	Name and Link	Product category/group	Product(s)
			previously covered by PCR 2013:07 Corrugated paper and paperboard (expired 2021-08-11). Note that an EPD based on PCR 2013:08 shall not be compared with an EPD based on the present PCR.
PCR	Crates for food	PCR 2018:02 Crates for food	This document provides Product Category Rules (PCR) for the assessment of the environmental performance of Crates for food corresponding to UN CPC 3170, UN CPC 32153 and UN CPC 36490 and the declaration of this performance by an EPD®. Cartons, boxes, cases, record sleeves and other packing containers (except bags) of paper, paperboard, cellulose wadding or webs of cellulose fibres; box files, letter trays, and similar articles, of paper or paperboard of a kind used in offices, shops or, Packing cases, boxes, crates, drums and similar packings, of wood; cable-drums of wood; pallets, box pallets and other load boards, of wood; casks, barrels, vats, tubs and other coopers' products and parts thereof, of wood (including staves), Other articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics.
PCR	Multi-purpose film	PCR 2021:01 Multi-purpose films (1.0.2) Other plates, sheets, film, foil and strip, of plastics, Plates, sheets, film, foil and strip, of plastics, not self-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials	This document provides Product Category Rules (PCR) for the assessment of the environmental performance of Multi-purpose films and the declaration of this performance by an EPD. The PCR covers multi-layer films produced by extrusion (not matching) of thermoplastics polymer granule and bioplastic polymer granule based by sequential or simultaneous stretching. The corresponding UN CPC classification is 36330 (Plates, sheets, film, foil and strip, of plastics, notself-adhesive, non-cellular and not reinforced, laminated, supported or similarly combined with other materials) and 36390 (Other plates, sheets, film, foil and strip, of plastics). Films intended for packaging are not covered by this PCR, but by PCR 2019:13 Packaging.

Type	Name and Link	Product category/group	Product(s)
PCR	Packaging	PCR 2019:13 Packaging (1.1)	This document provides Product Category Rules (PCR) for the assessment of the environmental performance of packaging products. It aims to be the main way to develop and register EPDs in the International EPD System and it refers to the International ISO standard developed for packaging. This document is developed through a multi-code (UN CPC codes) and multi-material approach. The framework of the document is based on the main functions of packaging as stated with the ISO definition. "Packaging": product to be used for the containment, protection, handling, delivery, storage, transport and presentation of goods, from raw materials to processed goods, from the producer to the user or consumer, including processor, assembler or other intermediary. The listed CPC codes constitute a non-exhaustive list. Other CPC codes may also be relevant for this PCR. This PCR has been developed with the modular approach regarding the life cycle stages and the system boundaries definition. The declared unit is based on technical characteristics relevant for any packaging purpose, extendable to functional unit to include intended use, use phase and end-of-life. If this document is used for consumer packaging (packaging constituting, with its contents, a sales unit for the final user or consumer at the point of retail) it may be used for an EPD for packaging products based on a functional unit, cradle-to-grave; If this document is used for distribution packaging (packaging designed to contain one or more articles or packages, or bulk material, for the purposes of transport, handling and/or distribution), it may be used for an EPD for packaging products

Type	Name and Link	Product category/group	Product(s)
			based on a declared unit, cradle-to-gate or cradle-to-gate with options. Other already issued PCRs on the packaging sector can potentially remain valid as stand- alone PCRs and they can be gradually made compliant with this PCR. Sacks and bags, of a kind used for the packing of goods, Packing cases, boxes, crates, drums and similar packings, of wood; cable-drums of wood; pallets, box pallets and other load boards, of wood; casks, barrels, vats, tubs and other coopers' products and parts thereof, of wood (including staves), Cartons, boxes, cases, record sleeves and other packing containers (except bags) of paper, paperboard, cellulose wadding or webs of cellulose fibres; box files, letter trays, and similar articles, of paper or paperboard of a kind used in offices, shops or, Ceramic wares for laboratory, chemical or other technical uses; ceramic troughs, tubs and similar receptacles of a kind used in agriculture; ceramic pots, jars and similar articles of a kind used for the conveyance or packing of goods, Tanks, reservoirs and containers of iron, steel or aluminium, Bottles, jars, phials and other containers, of glass, of a kind used for the conveyance or packing of goods, except ampoules; stoppers, lids and other closures, of glass, Packaging products of plastics, Tanks, casks, drums, cans, boxes and similar containers (other than for compressed or liquefied gas) of iron, steel or aluminium, of a capacity not exceeding 300 litres, not fitted with mechanical or thermal equipment; stoppers, caps and lids.
PCR	Pulps of wood or other fibrous cellulosic material	PCR 2022:02 Pulps of wood or other fibrous cellulosic material	This document provides Product Category Rules (PCR) for pulps of wood or other fibrous cellulosic material. The product category corresponds to UN CPC 3211.
EPD	Single-use biobased food tray		It detail the EDP for single-used biobased food tray produced by the PackBenefit S.L.

Type	Name and Link	Product category/group	Product(s)
	Single-use biobased food tray - EPD Norway (epd-norge.no)		PackBenefit's food tray is made from natural materials (bio-based and from FSC certified sources), with sealable surface treatment as an alternative to conventional oil-based waxes and resins. The product is a laminated cellulose-base single-use tray. The product included in this EPD is manufactured in Spain and is representative for the northern of Europe – with suppliers from the Nordic countries.
PCR	Dispensing Systems	PCR 2013:09 Dispensing systems (3.0.0)	Other articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics. This document provides Product Category Rules (PCR) for the assessment of the life-cycle environmental performance of dispensing systems and the declaration of this performance by an EPD. The product category corresponds to a subset of UN CPC 36490 Other articles for the conveyance or packing of goods, of plastics, stoppers, lids caps and closures of plastics, and a subset of UN CPC 42999 Metal goods N.E.C, corresponding to metallic dispensing systems. More information about the product group is available in the PCR.

Type	Name and Link	Product category/group	Product(s)
Electrical and Electronic Equipment **Definition in the EPR Regulations:** E&EE means equipment which is dependent on electric currents or electromagnetic fields in order 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 1 000 volts for alternating current and 1 500 volts for direct current **Identified products or class of products:** (a) Large equipment (any external dimension more than 100 cm); (b) Medium equipment (any external dimension between 50 and 100 cm); (c) Small equipment (no external dimension more than 50 cm); and (d) Batteries			
PCR	Air conditioning machines	PCR 2021:02 Air-conditioning machines (1.0)	This document provides Product Category Rules (PCR) for the assessment of the environmental performance of air-conditioning machines and the declaration of this performance by an EPD. The product category corresponds to a subset of the UN CPC 43912 Air-conditioning machines. The PCR covers air-conditioning machines, comprising a motor-driven fan and elements for changing the temperature and humidity, of a kind designed to be fixed to a window, wall, ceiling or floor, self-contained or "split-system", incorporating a refrigerating unit, with or without a valve for reversal of the cooling/heat cycle (reversible heat pumps), that can be used in residential or tertiary buildings. The product category includes the following headings/subheadings of HS 2007: - 8415.10: Air conditioning machines; comprising a motor-driven fan and elements for changing the temperature and humidity, of a kind designed to be fixed to a window, wall, ceiling or floor, self-contained or "split-system"

Type	Name and Link	Product category/group	Product(s)
			- 8415.81: Air conditioning machines; containing a motor driven fan, other than window or wall types, incorporating a refrigerating unit and a valve for reversal of the cooling/heat cycle (reversible heat pumps) - 8415.82: Air conditioning machines; containing a motor driven fan, other than window or wall types, incorporating a refrigerating unit - 8415.83: Air conditioning machines; containing a motor driven fan, other than window or wall types, not incorporating a refrigerating unit
PCR	Home and SOHO gateway	PCR 2013:10 Home and SOHO Gateway	This document provides Product Category Rules (PCR) for the assessment of the environmental performance of UN CPC 47223 (with specific regard for modems or other transmission data/voice apparatus) and the declaration of this performance by an EPD. Other telephone sets and apparatus for transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network).
PCR	Other special- and general-purpose machinery and parts thereof	PCR 2010:08 Other special- and general-purpose machinery and parts thereof	This document (version 4.0) provides Product Category Rules (PCR) for the assessment of the environmental performance of UN CPC group 449 (Other special-purpose machinery and pats thereof) and underlying classes, as well as machines designed for a general purpose, as defined by the UN CPC group 439 (Other general-purpose machinery and parts thereof) and underlying classes. Product group also includes machines under class 44221 and class 44629. Note that scope was expanded as of version 4.0.
PCR	Electronic devices, components and services	PCR Under development - Electronic devices, components	This main PCRs shall set the overall and sector-general EPD requirements for the electronics sector, and allow EPDs based

Type	Name and Link	Product category/group	Product(s)
		and services (main PCR to be complemented by c-PCRs)	on a declared unit for all products of the sectors. More specific requirements will be set by complementary PCRs (c-PCRs), allowing EPDs based on functional units. The scope of the PCR is now being discussed in the PCR Committee. Preliminary, the scope is described as covering UN CPC divisions 43-48 and 84, and any electronic and electric equipment that is built in, and thus forms part of construction, is excluded from the scope of this PCR. Also product categories covered by other PCRs in the International EPD System are excluded from the scope. Some of these will over time be upgraded to c-PCRs under this PCR (e.g., 2014:04 Parts and accessories of computing machines (e.g. laser printer cartridges).
PCR	Part and accessories of computing machines	PCR 2014:04 Parts and accessories of computing machines (e.g. laser printer cartridges) (3.0)	This document provides Product Category Rules (PCR) for the assessment of the environmental performance of parts and accessories of computing machines (e.g. laser printer cartridges) corresponding to UN CPC 45290 and the declaration of this performance by an EPD.
PCR	Machine-tools for drilling, boring or milling metals and composite materials	PCR 2012:02 Machine-tools for drilling, boring or milling metals and composite materials (4.0.0)	This document provides Product Category Rules (PCR) for the assessment of the life-cycle environmental performance of machine-tools for drilling, boring or milling metals and composite materials and the declaration of this performance by an EPD. The scope of the PCR corresponds to UN CPC 44214 machine-tools for drilling, boring or milling metals. This UN CPC classification is not exhaustive, as machine-tools for drilling, boring or milling composite materials are also covered by the PCR.
PCR	Being updated - AC and DC gear motors for automation systems	PCR 2019:11 Being updated - AC and DC gear motors for	This document provides Product Category Rules (PCR) for the assessment of the environmental performance of AC and DC

Type	Name and Link	Product category/group	Product(s)
		automation systems (1.0.3)	gear motors for automation systems, and the declaration of this performance by an EPD. The product category corresponds to subsets of UN CPC 46111 “Motors of an output not exceeding 37.5 W; other DC motors; DC generators” and UN CPC 46112 “Universal AC/DC motors of an output exceeding 37.5 W; other AC motors; AC generators (alternators)". The product category includes all the electrical equipment (gear motors) which are designed to assure the movement of an opening/closing system. It refers to a product composed by electronic and mechanic parts that are switched on and switched off with the supply of electricity. The equipment assimilates electricity in order to apply a force and make the movement happen. For instance, the products included in this category can provide the functioning of two main groups of systems: (1) outdoor closures and (2) indoor closures.
PCR	Under development - Electronic and electric equipment and electronic components (non-construction) (main PCR to be complemented by c-PCRs)	Non-exhaustive list of products falling under the scope of this PCR are: • Electric Vehicle Conductive Charging systems, HS code 8504, or UN CPC code 461 • Power electronic converter systems and equipment, HS code 8504, or UN CPC code 461 • Electric accumulators, including separators therefor; whether or not rectangular (including square), HS code 8507 • Audio, Video and IT Products,	This main PCRs will set the overall and sector-general EPD requirements for the electronics sector, and allow EPDs based on a declared unit for all products of the sectors. More specific requirements will be set by complementary PCRs (c-PCRs), allowing EPDs based on functional units. This document will provide Product Category Rules (PCR) for the assessment of the environmental performance of Electronic and electric equipment, and electronic components (non-construction), and the declaration of this performance by an EPD. The product category corresponds to UN CPC divisions 43-48, 84 and HS codes - category 85 - Electrical machinery and equipment and parts thereof. Any electronic and electric equipment that classifies as construction product, is excluded from the scope of this PCR.

Type	Name and Link	Product category/group	Product(s)
		UN CPC code 451, 452, 473, 476, 478 • Electrical appliances for household and similar purposes, UN CPC code 448 • Electricity metering equipment, UN CPC 4824 • Low-voltage switchgear and control gear assemblies, part of UN CPC 462 • Servers, part of UN CPC 452 • Electrical machines and apparatus; having individual functions, not specified or included elsewhere in this chapter, HS code 8543	
c-PCR*	Photovoltaic modules and parts thereof https://www.epd-norge.no/pcr-register/category353.html	PCR 2019:14-c-PCR-016 c-PCR-016 Photovoltaic modules and parts thereof (adopted from EPD Norway 2022-04-27)	PCR – Part B for photovoltaic modules used in the building and construction industry, including production of cell, wafer, ingot block, solar grade silicon, solar substrates, solar superstrates and other solar grade semiconductor materials" (NPCR 029 version 1.2) of EPD Norway has been adopted as a c-PCR to PCR 2019:14 of the International EPD® System, with the following additional clarifications, specifications and restrictions: 'The PCR is applicable not only for PV modules (and parts thereof) used in the building and construction industry, but also for standalone modules mounted on ground.'
PCR	PV components: invertors, battery energy storage systems, combiner boxed and tracker systems	PCR 2019:14-c-PCR-024 PV components: invertors, battery energy storage systems, combiner boxed and tracker systems (2023-01-02)	This is a complementary PCR (c-PCR) and further specification of PCR 2019:14 Construction products, to be used for the assessment of the environmental performance of **components of photovoltaic (PV) power plants, specifically invertors, battery energy storage systems, combiner boxes and tracker**

Type	Name and Link	Product category/group	Product(s)
			systems, and the declaration of this performance by an EPD following EN 15804:A2. Components of PV power plants covered by this PCR are invertors, battery energy storage systems, combiner boxes and tracker systems . Only such products intended for PV power plants are included in the scope. The scope of the PCR corresponds to subsets of UN CPC subclasses 461, 462, 463 and 464. Note that the PCR does not cover PV modules and other parts/components than those listed above. PV modules, and parts such as cell, wafer, ingot block, solar grade silicon, solar substrates, solar superstrates and other solar grade semiconductor materials, are instead are covered by c-PCR-016. Note that the PCR does not cover entire PV power plants, which are covered by PCR 2007:08 Electricity, steam and hot/cold water generation and distribution.

*c-PCR refers to a complementary PCR developed to complement the main PCR for sub-products/categories.

Lighting Equipment **Definition in the EPR Regulations:** means electrical or electronic equipment used for producing artificial light or illumination ", and also includes any peripherals of the lighting bodies such as luminaires, switch components, ballasts, fixtures and modules. **Identified products or class of products:** Lighting products: Different types of Lighting equipment include, but are not limited to: (i) Gas Discharge Lighting; - low pressure discharge Lighting: fluorescent (compact, linear and non- linear and nonfluorescent (low pressure sodium, low pressure mercury vapour); - high intensity discharge Lighting: high pressure sodium, low pressure sodium, metal halide, high pressure mercury vapour, xenon; - Lighting for special purposes; (ii) All Light emitting diode (LED) lighting sources and types; (iii) Signal/signage lighting as well as associated equipment; (iv) Luminaires and lighting equipment fixtures or modules or associated electrical components; (v) Laser, Pixel and ultraviolet irradiation (UVI) or ultraviolet germicidal irradiation (UVGI) lighting; (vi) Automotive lighting and luminaires; (vii) Incandescent (filament) light bulbs and Halogen; and (viii) Off grid solar powered lighting.
None available at time of writing

Type	Name and Link	Product category/group	Product(s)
Portable Batteries **Definition in the EPR Regulations:** Portable Battery means a battery which is sealed and weighs up to 5kg, can be hand-carried without difficulty, and is neither an automotive or industrial battery. A portable battery of general use (PBGU) is defined as the most commonly used sizes known to the average consumer, including 4,5 Volts (3R12), button cells, D, C, AA, AAA, AAAA, A23, 9 Volts (PP3), all of which may be rechargeable and non-rechargeable (EU not SA definition) **Identified products or class of products:** EPR will be applicable to the following identified product or class of products: Portable batteries: • Alkaline/Zink carbon batteries; • Primary (single use) Lithium batteries; • Nickel metal hydride batteries; • Silver oxide batteries; • Zinc air batteries / Air depolarised batteries.			
PEFCR	PEFCR for High Specific Energy Rechargeable Batteries for Mobile Applications - https://ec.europa.eu/environment/eussd/smgp/pdf/PEFCR_Batteries.pdf	Lithium-ion and nickel metal hydride batteries for three application fields: • e-mobility (e.g., e-bikes, EV, PHEV, cars, bus/trucks) • ICT (e.g., tablets and phones, computers, cameras, games) • Cordless power tools (e.g., drills, electric screwdrivers)	The battery technologies and chemistries covered in the PEFCR for batteries included: • Li-ion: LCO (LiCoO2), NMC (LiNixMnyCozO2), LMO (LiMnO2) and LFP (LiFePO4) • NiMH. The purpose of high specific energy rechargeable batteries is to store and supply autonomous energy to electrical equipment. The scientific unit of measure for the electrical energy is the Watt-hour (Wh). In the case of rechargeable batteries, the total service provided can be measured by the total

Type	Name and Link	Product category/group	Product(s)
			watt-hours delivered over the life of the rechargeable battery, measured in kilo-watt-hours (kWh). Rechargeable batteries are final products used in different applications. The mobile application itself or the vehicle itself (e.g. e-bike, cell phone) is not covered by this PEFCR. For the development of a PEF profile of a mobile application where a battery in this scope is one of the components, the PEFCR shall be used as reference for the rechargeable battery.
PCR	PCR Under development - Batteries and parts thereof (c-PCR under main PCR Electronic and electric equipment and electronic components)		This will not be a standalone PCR but a complementary PCR (c-PCR) to the main PCR for **electronic and electric equipment and electronic components** that is under development.

Lubricant Oil

Definition in the EPR Regulations: Lubricant oil means all virgin and re-refined mineral and synthetically based lubricants, with or without additives that is used for lubrication within heat transfer, load transfer, insulation or any other application.

Identified products or class of products: EPR will be applicable to the following identified product or class of products: **Lubricant oil**
The Notice does not apply to the following categories of products:

- Technical and medicinal white oils;
- Vegetable oils;
- Greases;
- Waxes;
- Petrolatums;
- Two stroke oils;
- Chainsaw cutter bar lubricants;
- Rockdrill lubricants;
- Water-based fluids with less than 80% oil content;
- Phosphate esters;
- Pesticidal and fungicidal agricultural spray base oils;
- Process oils where the lubricant is compounded into a solid;
- Marine engine oils;
- Rolling oils;
- Drawing oils;
- Rust preventatives;
- Mould release oils;
- Wire rope and open gear dressing oils;
- Shock absorber oils.

None available at time of writing

Pesticides

Definition in the EPR Regulations: Pesticide means any chemical substance or biological remedy, or any mixture or combination of any substance or remedy intended or offered to:

a) For destruction, control, repelling, attraction, or prevention of any undesired microbe, alga, nematode, fungus, insect, plant, vertebrae, invertebrate or any product thereof, but excluding any chemical substance, biological remedy or other remedy in so far as it is controlled under the Medicine and Related Substances Control Act, 1995 (Act No 101 of 1995)or
b) As plant growth regulator, defoliant, desiccant or legume inoculant, and anything which the Minister responsible for Agriculture has by notice in the Gazette declared an agricultural remedy.

Identified products or class of products: EPR will be applicable to the following identified product or class of products:

- Pesticides;
- Pesticides co-formulant;
- Related containers

None available at time of writing

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