



SLOVENSKI STANDARD
oSIST prEN IEC 63366:2023
01-maj-2023

Pravila za kategorije proizvodov za ocenjevanje življenjskega cikla električnih in elektronskih proizvodov ter sistemov

Product category rules for life cycle assessment of electrical and electronic products and systems

iTeh STANDARD PREVIEW
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Règles de définition des catégories de produits pour l'analyse du cycle de vie des produits et systèmes électriques et électroniques

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Ta slovenski standard je istoveten z: prEN IEC 63366:2023

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29.020	Elektrotehnika na splošno	Electrical engineering in general
31.020	Elektronske komponente na splošno	Electronic components in general

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en



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IEC TC 111 : ENVIRONMENTAL STANDARDIZATION FOR ELECTRICAL AND ELECTRONIC PRODUCTS AND SYSTEMS	
SECRETARIAT: Italy	SECRETARY: Mr Alfonso Sturchio
OF INTEREST TO THE FOLLOWING COMMITTEES: TC 121	PROPOSED HORIZONTAL STANDARD: <input type="checkbox"/> Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: <input type="checkbox"/> EMC <input checked="" type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input type="checkbox"/> SAFETY	
<input checked="" type="checkbox"/> SUBMITTED FOR CENELEC PARALLEL VOTING <input type="checkbox"/> NOT SUBMITTED FOR CENELEC PARALLEL VOTING	
<p>Attention IEC-CENELEC parallel voting</p> <p>The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.</p> <p>The CENELEC members are invited to vote through the CENELEC online voting system.</p>	

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- any relevant patent rights of which they are aware and to provide supporting documentation,
- any relevant "in some countries" clauses to be included should this proposal proceed. Recipients are reminded that the enquiry stage is the final stage for submitting "in some countries" clauses. See AC/22/2007.

TITLE:

Product category rules for life cycle assessment of electrical and electronic products and systems.

PROPOSED STABILITY DATE: 2029

NOTE FROM TC/SC OFFICERS:

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62 INTERNATIONAL ELECTROTECHNICAL COMMISSION

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64

65 **PRODUCT CATEGORY RULES FOR LIFE CYCLE ASSESSMENT OF**
66 **ELECTRICAL AND ELECTRONIC PRODUCTS AND SYSTEMS**

67

68

FOREWORD

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101 IEC 63366 has been prepared by IEC technical committee 111: ENVIRONMENTAL
102 STANDARDIZATION FOR ELECTRICAL AND ELECTRONIC PRODUCTS AND SYSTEMS. It
103 is an International Standard.

104 The text of this International Standard is based on the following documents:

Draft	Report on voting
111/XX/FDIS	111/XX/RVD

105

106 Full information on the voting for its approval can be found in the report on voting indicated in
107 the above table.

108 The language used for the development of this International Standard is English.

109 This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in
110 accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available
111 at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are
112 described in greater detail at www.iec.ch/publications.

113 The committee has decided that the contents of this document will remain unchanged until the
114 stability date indicated on the IEC website under webstore.iec.ch in the data related to the
115 specific document. At this date, the document will be

- 116 • reconfirmed,
- 117 • withdrawn,
- 118 • replaced by a revised edition, or
- 119 • amended.

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120

INTRODUCTION

121 In recent years, environmental aspects of electrical and electronic products and systems (EEPS)
122 gained in importance for interested parties, such as customers and regulators.

123 In addition to qualitative approaches already widely applied in the context of environmental
124 conscious design process, quantitative information on the potential environmental impacts of
125 the full life cycle of products gained further interest. This generates the need to provide
126 harmonized rules for the underlying life cycle assessment (LCA) in order to provide robust and
127 consistent quantitative environmental data on EEPS, as well as to enable data aggregation at
128 system level, e.g. buildings, power drive systems and control cabinets.

129 The definition of product category rules (PCR), derived from ISO14025:2006, is an established
130 method for a consistent approach by setting minimum quality standards for LCA in context to
131 environmental product declarations (EPD), and hence is now defined as core rules in this
132 standard for the variety of EEPS. It is also noted that comparability of Type III environmental
133 declarations depends on PCR. Those requirements are defined in ISO14025:2006, 6.7.2.

134 On the base of the overarching PCR set out as core rules for EEPS, product specific rules (PSR)
135 should be elaborated to further detail the requirements for the LCA in the specific context of the
136 products or systems in scope. This can be done e.g. by product specific standardization
137 committees or environmental declaration programs.

138 Accordingly, IEC 63372 provides methodologies for quantification of GHG emissions, which
139 could also be regarded as carbon footprint PCR (CFP-PCR) for EEPS.

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PRODUCT CATEGORY RULES FOR LIFE CYCLE ASSESSMENT OF ELECTRICAL AND ELECTRONIC PRODUCTS AND SYSTEMS

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141
142

1 Scope

144 This document defines product category rules (PCR) for electronic and electrical products and systems (EEPS). It specifies the process and requirements on how to conduct life cycle assessment(LCA) in the context of environmental declarations.

147 PCR is complemented by additional product-specific rules (PSR), which further define e.g. functional units and default scenarios in the product-specific context. Therefore, it also provides guidance on how to develop PSR in corresponding technical committees.

150 This document provides common rules for:

- 151 a) LCA, including the requirements for developing default scenarios;
- 152 b) the LCA report;
- 153 c) the development of PSRs.

154 This document provides further guidelines for environmental declarations.

155 The LCA principles and framework are based on the ISO 14040 series of standards (i.e., ISO 14040 and ISO 14044), and therefore out of scope of this standard.

2 Normative references

158 The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

162 ISO 14040, Environmental management - Life cycle assessment - Principles and framework

163 ISO 14044:2006, Environmental management - Life cycle assessment - Requirements and guidelines

165 ISO 14020, Environmental labels and declarations - General principles

166 ISO 14021:2016, Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling)

168 ISO 14025, Environmental labels and declarations - Type III environmental declarations - Principles and procedures

170 ISO/TS 14027, Environmental labels and declarations – Development of product category rules

171 ISO 14040, Environmental management - Life cycle assessment - Principles and framework

172 ISO 14044:2006, Environmental management - Life cycle assessment - Requirements and guidelines

174 ISO 14020, Environmental labels and declarations - General principles

175 ISO 14021:2016, Environmental labels and declarations - Self-declared environmental claims
176 (Type II environmental labelling)

177 ISO 14025, Environmental labels and declarations - Type III environmental declarations -
178 Principles and procedures

179 ISO/TS 14027, Environmental labels and declarations – Development of product category rules

180 **3 Terms and definitions**

181 For the purposes of this document, the following terms and definitions apply.

182 ISO and IEC maintain terminology databases for use in standardization at the following
183 addresses:

- 184 • IEC Electropedia: available at <https://www.electropedia.org/>
- 185 • ISO Online browsing platform: available at <https://www.iso.org/obp>

186 **3.1**

187 **Waste collection**

188 the gathering of waste, including the preliminary sorting and preliminary storage of waste for
189 the purpose of transport to a waste treatment facility

190 **3.2**

191 **co-product**

192 two or more products coming from the same unit process or product system

193 Note 1 to entry: Co-product, by-product and product have the same status and are used for identification of several
194 distinguished flows of products from the same unit process. From co-product, by-product and product, waste is the
195 only output to be distinguished as a non-product

196 [SOURCE: ISO 14040:2006, 3.10, modified, a note to entry has been added]

197 **3.3**

198 **cut-off criteria**

199 specification of the amount of material or energy flow or the level of environmental significance
200 associated with unit processes or product system to be excluded from a study

201 [SOURCE: ISO 14040:2006, 3.18]

202 **3.4**

203 **declared unit**

204 quantity of the product used as a reference unit for the environmental declaration when a
205 functional unit cannot be directly used

206 Note 1 to entry: The declared unit might differ from the functional unit in terms of the declaration.

207 **3.5**

208 **disposal**

209 any operation which is not recovery even where this operation has a reclamation of substances
210 or energy secondary consequences

211 [SOURCE: IEC 62635:2012, 3.1]

212 **3.6**

213 **energy recovery**

214 production of useful energy through direct and controlled combustion or other processing of
215 waste

216 Note 1 to entry: Waste incinerators producing hot water, steam and/or electricity are common means for energy
217 recovery.

218 [SOURCE:IEC 60050-904:2014, 904-04-03]

219 **3.7**

220 **environment**

221 surroundings in which a product or system exists, including air, water, land, natural resources,
222 flora, fauna, humans and their interrelation

223 [SOURCE: IEC Guide 109:2012, 3.3]

224 **3.8**

225 **environmental aspect**

226 element of an organization's activities or products that can interact with the environment

227 Note 1 to entry: A significant environmental aspect has or can have a significant environmental impact.

228 [SOURCE: IEC Guide 109:2012, 3.4]

229 **3.9**

230 **environmental claim**

231 statement, symbol or graphic that indicates an environmental aspect of a product, a component
232 or packaging

233 Note 1 to entry: An environmental claim may be made on product or packaging labels, through product literature,
234 technical bulletins, advertising, publicity, telemarketing, as well as through digital or electronic media such as the
235 internet.

236 [SOURCE: ISO 14021:2016, 3.1.4]

237 **3.10**

238 **environmental impact**

239 change to the environment, whether adverse or beneficial, wholly or partly resulting from
240 environmental aspects.

241 [SOURCE: IEC Guide 109:2012, 3.5, modified, "an organization's" has been omitted]

242 **3.11**

243 **environmental declaration**

244 claim which indicates the environmental aspects of a product or service

245 Note 1 to entry: An environmental label or declaration may take the form of a statement, symbol or graphic on a
246 product or package label, in product literature, in technical bulletins, in advertising or in publicity, amongst other
247 things.

248 [SOURCE: ISO 14020:2000, 2.1]

249 **3.12**

250 **environmental management system**

251 part of the management system used to manage environmental aspects, fulfil compliance
252 obligations, and address risks and opportunities

253 [SOURCE: ISO 14001:2015, 3.1.2]

254 **3.13**

255 **functional unit (LCA)**

256 **FU**

257 quantified performance of a product system for use as a reference unit

258 [SOURCE: ISO 14040:2006, 3.20, modified, added "(LCA)" to term]

259 **3.14**
260 **hazardous substance**
261 substance that has, according to defined classification criteria, the potential for adversely
262 impacting human health and/or the environment

263 Note 1 to entry: The criteria for determining whether a substance is classified as hazardous are defined by law or
264 regulation

265 [SOURCE: IECGuide109:2012, 3.6]

266 **3.15**
267 **homogenous product family**
268 subgroup of a product family based on the underlying technology or build where the
269 environmental impacts can reasonably be expected to be similar and therefore scalable over
270 the group through a function of certain physical characteristics, e.g. power or weight

271 **3.16**
272 **interested party**
273 person or organization that can affect, be affected by, or perceive itself to be affected by a
274 decision or activity

275 EXAMPLE Customers, communities, suppliers, regulators, non-governmental organizations, investors and
276 employees

277 Note 1 to entry: To “perceive itself to be affected” means the perception has been made known to the organization

278 [SOURCE: ISO 14001:2015, 3.1.6]

279 **3.17**
280 **landfill**
281 site used for the disposal of waste onto or into land (i.e. underground). Including onsite waste
282 disposal sites (i.e. landfill where a producer of waste is carrying out its own waste disposal at
283 the place of production) and storage site used to store waste more than one year

<https://standards.iteh.ai/catalog/standards/sist/d17d3f4c-249f-47ef-be18->

284 Note 1 to entry: Excluded are facilities where waste is unloaded in order to permit its preparation for further transport
285 for recovery, treatment or disposal elsewhere, and storage of waste prior to recovery or treatment for a period less
286 than three years as a general rule, or storage of waste prior to disposal for a period less than one year

287 **3.18**
288 **LCA report**
289 accompanying document to the life cycle assessment, used as a complement to the
290 environmental declaration giving further detailed information about the inputs, outputs, used
291 LCI-data and assumptions in regards to this standard

292 Note 1 to entry: This LCA report has to be kept for justification purposes in terms of environmental declaration
293 verification or market surveillance

294 **3.19**
295 **life cycle**
296 consecutive and interlinked stages of a product system, from raw material acquisition or
297 generation from natural resources to final disposal

298 Note 1 to entry: The phrase “life cycle phase” is sometimes used interchangeably with “life cycle stage”

299 [SOURCE: ISO 14040:2006, 3.1]

300 **3.20**
301 **life cycle assessment**
302 **LCA**
303 compilation and evaluation of the inputs, outputs and the potential environmental impacts of a
304 product system throughout its life cycle

305 [SOURCE: ISO 14040:2006, 3.2]

- 306 **3.21**
307 **life cycle inventory analysis**
308 **LCIA**
309 phase of life cycle assessment involving the compilation and quantification of inputs and outputs
310 for a product throughout its life cycle
- 311 [SOURCE: ISO 14040:2006, 3.3]
- 312 **3.22**
313 **material**
314 substance or mixture of substances within a product or product part
- 315 Note 1 to entry: Material can be part or a product
316 [SOURCE: IEC 62474:2018, 3.15, modified, a note to entry has been added]
- 317 **3.23**
318 **material recovery**
319 material-processing operations including mechanical recycling, feedstock (chemical) recycling
320 and organic recycling, but excluding energy recovery
- 321 [SOURCE: ISO 15270:2008, 3.20]
- 322 **3.24**
323 **organization**
324 person or group of people that has its own functions with responsibilities, authorities and
325 relationships to achieve its objectives
- 326 [SOURCE: ISO 14001:2015, 3.1.4, modified, note to entry has been deleted]
- 327 **3.25**
328 **packaging**
329 material that is used to protect or contain a product during transportation, storage, marketing
330 or use
- 331 Note 1 to entry: For the purposes of this standard, the term “packaging” also includes any item that is physically
332 attached to, or included with, a product or its container for the purpose of marketing the product or communicating
333 information about the product.
- 334 [SOURCE: ISO 14021:2016, 3.1.13]
- 335 **3.26**
336 **product system**
337 collection of unit processes with elementary and product flows, performing one or more defined
338 functions, and which models the life cycle of a product
- 339 [SOURCE: ISO 14040:2006, 3.28]
- 340 **3.27**
341 **process**
342 set of interrelated or interacting activities which transforms inputs into outputs
- 343 Note 1 to entry: A process can be documented or not.
344 [SOURCE: ISO 14001:2015, 3.3.5]
- 345 **3.28**
346 **product**
347 output of an organization that can be produced without any transaction taking place between
348 the organization and the customer
- 349 Note 1 to entry: Production of a product is achieved without any transaction necessarily taking place between provider
350 and customer, but can often involve this service element upon its delivery to the customer.
- 351 Note 2 to entry: The dominant element of a product is that it is generally tangible.

352 Note 3 to entry: Hardware is tangible and its amount is a countable characteristic (e.g. tyres). Processed materials
353 are tangible and their amount is a continuous characteristic (e.g. fuel and soft drinks). Hardware and processed
354 materials are often referred to as goods. Software consists of information regardless of delivery medium (e.g.
355 computer programme, mobile phone app, instruction manual, dictionary content, musical composition copyright,
356 driver's license).

357 [SOURCE: ISO 9000:2015, 3.7.6]

358 **3.29**
359 **product category**
360 group of products that can fulfil equivalent functions

361 Note to entry: product category is a general term, it does not mean the group of products have the same function.
362 [SOURCE: ISO 14025:2006, 3.12, modified, a note to entry is added]

363 **3.30**
364 **product category rules**
365 **PCR**
366 set of specific rules, requirements and guidelines for developing Type III environmental
367 declarations for one or more product categories

368 [SOURCE: ISO 14025:2006, 3.5]

369 **3.31**
370 **product group**
371 subgroup of a product category – technologically or functionally similar products

372 **3.32**
373 **product specific rules**
374 **PSR**
375 set of specific rules, requirements and guidelines, based upon and complementing the PCR, for
376 a specific product family

377 Note to entry: PCR and PSR are comparative concepts. To ensure consistency in IEC community, PCR refer to rules
378 at EEPS level, and PSR refer to rules at product committee level.

379 **3.33**
380 **raw material**
381 primary or secondary material that is used to produce a product

382 Note 1 to entry: Secondary material includes recycled material.
383 [SOURCE: ISO 14040:2006, 3.15]

384 **3.34**
385 **recycling**
386 processing of waste materials for the original purpose or for other purposes, excluding energy
387 recovery

388 Note 1 to entry: processing of waste materials is for use as secondary materials
389 [SOURCE: ISO 15270:2008, 3.30, modified, a note to entry is added]

390 [SOURCE: IEC Guide 109:2012, 3.16, modified, original note 1 to entry is deleted and a new
391 note 1 to entry is added]

392 [SOURCE: IEC 901-07-10, original note 1 to entry is deleted and a new note 1 to entry is added]

393 **3.35**
394 **refurbishing**
395 functional or aesthetical maintenance or repair of an item to restore to original, upgraded, or
396 other predetermined form and functionality

397 [SOURCE: IEC 904-04-09]

398 **3.36**
399 **reference flow**
400 measure of the outputs from processes in a given product system required to fulfil the function
401 expressed by the functional unit

402 Note 1 to entry: The reference flows translate the abstract functional unit into specific product systems needed to
403 fulfil the required function with a required level of performance

404 [SOURCE: ISO 14040:2006, 3.29, modified, a note to entry has been added]

405 **3.37**
406 **reference product**
407 product or product system, supplied by the manufacturer, modelled in the LCA and taken as
408 reference to extrapolate the environmental impact of other products or product systems
409 matching the same functional unit (i.e homogeneous product family) and covered by the
410 environmental declaration

411 **3.38**
412 **reference service life**
413 **RSL**
414 service life of a product, component, assembly or system which is known to be expected under
415 a particular set, i.e. a reference set, of in-use conditions and which can form the basis for
416 estimating the service life under other in-use conditions

417 Note 1 to entry: The reference service life is a theoretical period used for calculation purposes. It can never be
418 compared to the minimum, average or actual service life of the product.

419 [SOURCE: ISO 15686-1:2011, 3.22, modified, a note to entry has been added]

420 **3.39**
421 **remanufacture**
422 production process that creates products using parts taken from previously used products

423 [SOURCE: IEV 904-04-10]

424 **3.40**
425 **reuse**
426 operation by which a product, or a part thereof, having reached the end of one use-stage is
427 used again for the same purpose for which it was conceived

428 [SOURCE: IEC/TR 62635:2012, 3.18]

429 **3.41**
430 **substance**
431 chemical element and its compounds in the natural state or obtained by any manufacturing
432 process, including any additive necessary to preserve its stability and any impurity deriving from
433 the process used, but excluding any solvent which may be separated without affecting its
434 stability or changing its composition

435 Note 1 to entry: Definition is taken from Globally harmonized system of classification and labelling (GHS): 2003,
436 Chapter 1.2, Definitions and abbreviations.

437 [SOURCE: IEC 62474:2012, 3.13]

438 **3.42**
439 **update**
440 to write new data to a logical block without destroying the previous data

441 After a block has been updated, a normal read returns the most recent generation of the data.
442 Earlier generations are still available after the update

443 [SOURCE: ISO/IEC 14776-321:2002, 3.1.2.4]