

circularity.ID® Open Data Standard Version 2.0

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Introduction

Description

The circularity.ID Open Data Standard describes essential digital product data for clothing and textiles to enable circular economy and recyclability in the fashion industry. Products identifiable with the circularity.ID Open Data Standard make the entire story of a product and its material components accessible and enable circular use and end-of-life phase on the data level.

Objective & Scope

The circularity.ID Open Data Standard is intended for use in the fashion industry for the labelling, identification and storing of digital product data, optimising products for a circular economy. It is specifically targeting the circularity and recyclability of textiles, and ultimately designed for the potential of fibre-to-fibre recycling.

In short, the circularity.ID can ensure that:

- 1) Information on essential material and chemical components is assessed, stored and accessible
- 2) Product data is automatically recognised by software at sorting facilities

- 3) Products are matched to appropriate recyclers, to be recyclable to best knowledge and method according to the current state of technology at end-of-life
- 4) Essential product information is available to consumers to enable longevity and multiple use cycles for a product, e.g through redesign and resell services.

Format

circularity.ID ODS is split into an XML component that contains immutable product data including material and chemical components, and a mutable set of data that contains product information such as product images, description, sustainability consumer information and service offers.

All documentation and resources can be retrieved from the Github repository, containing XML-Schema, validation tools and example data (<https://github.com/circularfashion/cf-circularity-id-standard>).

Contact

The circularity.ID is initiated and administered by circular.fashion UG (haftungsbeschränkt).

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Guidelines for Use

Use of circularity.ID® Open Data Standard

The circularity.ID Open Data Standard can be used according to the License GNU General Public License v3.0. and always needs to be referenced when using or modifying the standard. Using the circularity.ID Open Data Standard does not imply that a product was tested for recyclability by circular.fashion, but the use of the standard data format enables circular.fashion to conduct Circular Product Checks, and supports connected services and applications. The circularity.ID Open Data Standard does not imply that data created according to the standard must be made public. For integrating and complying with the standard through proprietary software (e.g. PLM Software) not compatible with the license please contact contact@circularity.ID.

Use of circularity.ID® Trademark

circularity.ID is a registered trademark. Using the the circularity.ID Open Data Standard does not include the right for using the circularity.ID trademark. circular.fashion is the only issuing body of the circularity.ID and will provide a unique identifying number as a proof. Only when circular.fashion issued an ID as circularity.ID the trademark is allowed to be used following separate guidelines stated in a different document.

Data Structure

The circularity.ID open data standard foresees the storing of product data and information in two separate datasets – the first part containing the immutable data that does not change post-creation, and therefore cannot be updated, and the second part containing mutable product information that can be updated during the product’s lifecycle. See Part A & Part B below.

Changelog

The following changes were made since v1.0:

- Field “Embellishment” is a choice of “Finishing”, own field removed
- Field “Fiber Component” has been renamed to “Content”
- “Step” > “Additional Information” has been removed
- “Origin Recycling Input” renamed to “Source recycled Input”
- “Origin Raw Material” renamed to “Source Raw Material”
- Many text fields have been changed to choice fields with predefined values. See schema code for available values. Following fields are affected: *Product Category, Content, Material Type, Finishing, Colour, Pattern, Dyeing Method, Printing Method, Tanning Method, Pretanning Method, Chemical Compliance, Construction, Biodegradability Certification.*

circularity.ID Data – XML Schema Version 2.0		
Part A: Immutable product data (not changeable after creation)		
Data point	Element name	Requirements
SKU	sku	Optional
SGTIN	sgtin	Optional
GTIN	gtin	Optional
PO Number	po_nr	Optional
Name	name	Mandatory
Brand	brand	Mandatory
Parent Company	company	Optional
Season	season	Optional
Colourway	colourway	Mandatory
Product Category	product_category	Mandatory
Product Type	product_type	Mandatory
Assembly ^{1*}	assembly	One or more
Manufacturing ⁴	step	Zero or more
Product Certification	certification	Optional
Instructions for Disassembly *	instructions	Optional
Finishing	finishing	Optional

Product Weight	product_weight	Optional
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¹ Assembly		
Name	name	Mandatory
Material ²	material	One or more

* For most cases, a garment has one assembly, i.e all material components are combined together. In the case of a circular design strategy following a design strategy for disassembly, containing multiple, detachable mono-material assemblies optimized for different material cycles, materials can be grouped into separate assemblies. Instructions for disassembly can be provided through the respective field.

² Material		
Material Type	type	Mandatory
Name	name	Mandatory
Component ³	component	One or more
Weight	weight	Optional
Average Consumption per Product	consumption	Optional
Construction	construction	Optional
Production Step	step	Optional
Colour	colour	Mandatory
Pattern	pattern	Optional
Dyeing Method	dyeing_method	Mandatory for circularity check
Dyestuff	dyestuff	Mandatory for circularity check
Printing Method	printing_method	Mandatory for circularity check
Print Dyestuff	print_dyestuff	Mandatory for circularity check
Finishing	finishing	Mandatory for circularity check
Chemical Compliance	chemical_compliance	Mandatory for circularity check
Biodegradability Certification	biodegradability_certification	Optional
Material Certification	material_certification	Optional
Tanning Method	tanning_method	Mandatory for circularity check of leather
Tanning Agent	tanning_agent	Mandatory for circularity check of leather
Pretanning	pretanning	Mandatory for circularity check of leather
Pretanning Agent	pretanning_agent	Mandatory for circularity check of leather

³ Component		
Content	content	Mandatory
Percentage	percentage	Mandatory

Is Recycled	is_recycled	Mandatory
Source Recycled Input	source_recycled_input	Optional
Source Raw Material	source_raw_material	Optional

Each component refers to a component in the material composition, e.g. cotton, elasthan.

⁴ Production step		
Type	type	Mandatory
Country	country	Mandatory
Company Name	company_name	Optional
Street	street	Optional
Postal	postal	Optional
City	city	Optional
OAR Number	oar	Optional

Information about production facilities for each production step can be provided through this fieldset. The primary use of the information is for transparent communication of product origin to customers. Type refers to production step, e.g. production of raw material, production, dyeing.

circularity.ID Data – Product Information		
Part B: Mutable product information (can be updated during the product’s lifecycle)		
Data point	Element name	Requirements
Product Description	description	Optional
Market Segment	segment	Optional
Recommended Retail Price	price	Optional
Season	season	Optional
Circular Design Strategy	strategy	Optional
Circular Design Strategy Description	strategy_description	Optional
Service Offer*	service	Optional
Service Description	service_description	Optional
Care Guide	care_guide	Optional
Brand Description	brand_description	Optional
Sustainability Statement	sustainability_statement	Optional
URL	url	Optional
Product Assets		
Brand Logo	logo	Optional
Product Images	product_images	Optional

* Services include return, resale, repair and similar offers to customers.