

Circular Economy Ontology Network (CEON) - Product Module

Metadata

IRI

<http://w3id.org/CEON/ontology/product/>

Title

Circular Economy Ontology Network (CEON) - Product Module

Creator

Huanyu Li

Contributor

Eva Blomqvist

Mikael Lindecrantz

Robin Keskisärkkä

Date Created

2023-03-16

License

<https://creativecommons.org/licenses/by/4.0/>

Version Iri

<http://w3id.org/CEON/ontology/product/0.3/>

Version Info

0.3

Preferred Namespace Prefix

product

Preferred Namespace Uri

<http://w3id.org/CEON/ontology/product/>

Description

The Product module of CEON (Circular Economy Ontology Network).

Covers Requirements

In addition to requirements covered by imported ODPs, covers the following requirements from Onto-DESIDE D3.1: CVN-Resource-2, CVN-ResourceType-4, C11-2, C12-1, C13-3, E2-1, T8-3.

Classes

Actor^c

IRI

<http://w3id.org/CEON/ontology/actorODP/Actor>

Resource Relation^c

IRI

<http://w3id.org/CEON/ontology/actorODP/ResourceRelation>

Super Class Of

[resourceODP:Composition](#)

Process^c

IRI

<http://w3id.org/CEON/ontology/processODP/Process>

Compliance^c

IRI	http://w3id.org/CE0N/ontology/product/Compliance
<u>In Domain Of</u>	complianceWith ^{op} hasCertificate ^{dp}
<u>In Range Of</u>	hasCompliance ^{op}

Matter composition^c

IRI	http://w3id.org/CE0N/ontology/product/MatterComposition
<u>Description</u>	A product composition is the composed information of a product in terms of a specific component, in which such a component is also a matter.
<u>Sub Class Of</u>	resourceODP:Composition
<u>In Domain Of</u>	associated with matter ^{op}
<u>Restriction</u>	associated with matter ^{op} <i>exactly</i> 1 Matter composition ^c

Product model^c

IRI	http://w3id.org/CE0N/ontology/product/Product
<u>Description</u>	Represents the common sense notion of a product, i.e. the abstract notion of a product type or product model, which is a model that is used for manufacturing products.
<u>In Domain Of</u>	has product component ^{op}
<u>In Range Of</u>	associated with product model ^{op} batch of products ^{op} has product component ^{op} modelled by ^{op}
<u>Restriction</u>	hasComposition ^{op} some Product model ^c hasComposition ^{op} some Product model ^c

Product composition^c

IRI	http://w3id.org/CE0N/ontology/product/ProductComposition
<u>Description</u>	A product composition is the composed information of a product in terms of a specific component, in which such a component is also a product.
<u>Sub Class Of</u>	resourceODP:Composition
<u>In Domain Of</u>	associated with product model ^{op}
<u>Restriction</u>	associated with product model ^{op} <i>exactly</i> 1 Product composition ^c

Product object^c

IRI	http://w3id.org/CE0N/ontology/product/ProductObject
Description	A product object is a physical object put into a market for sale, i.e. corresponding to the notion of an item, which conforms to the abstract idea of a product model. The product can be a thing that grows naturally or produced through some chemical or manufacturing processes.
Sub Class Of	resourceODP:PhysicalObject
In Domain Of	hasProductObjectComponent ^{op} modelled by ^{op}
In Range Of	associatedWithProductObject ^{op} hasProductObjectComponent ^{op}
Restriction	modelled by ^{op} <i>exactly</i> 1 Product object ^c

Product Object Composition^c

IRI	http://w3id.org/CE0N/ontology/product/ProductObjectComposition
Sub Class Of	resourceODP:Composition
In Domain Of	associatedWithProductObject ^{op}
Restriction	associatedWithProductObject ^{op} <i>exactly</i> 1 ProductObjectComposition ^c

Object Properties

associated with matter^{op}

IRI	http://w3id.org/CE0N/ontology/product/associatedWithMatter
Description	associatedWithMatter intends to represent the matter to which a matter composition information regards to.
Domain	Matter composition ^c
Range	resourceODP:Matter

associated with product model^{op}

IRI	http://w3id.org/CE0N/ontology/product/associatedWithProductModel
Description	associatedWithProductModel intends to represent the product model to which a product composition information regards to.
Domain	Product composition ^c
Range	Product model ^c

associated with product object^{op}

IRI	http://w3id.org/CE0N/ontology/product/associatedWithProductObject
Sub Property Of	topObjectProperty^{op}
Domain	ProductObjectComposition^c
Range	Product object^c

batch of products^{op}

IRI	http://w3id.org/CE0N/ontology/product/batchOfProduct
Description	batchOfProduct intends to represent what is the model product of a batch of objects.
Domain	resourceODP:BatchOfObjects
Range	Product model^c

compliance with^{op}

IRI	http://w3id.org/CE0N/ontology/product/complianceWith
Domain	Compliance^c

composition of^{op}

IRI	http://w3id.org/CE0N/ontology/product/compositionOf
Domain	resourceODP:Composition
Range	Product model^c or Product object^c or resourceODP:Matter^c

has compliance^{op}

IRI	http://w3id.org/CE0N/ontology/product/hasCompliance
Domain	Product model^c or Product object^c or http://w3id.org/CE0N/ontology/processODP/Process^c or actorODP:Actor^c
Range	Compliance^c

has composition^{op}

IRI	http://w3id.org/CE0N/ontology/product/hasComposition
Description	hasComposition intends to represent that a product model or physical object can have composition information.
Domain	resourceODP:PhysicalObject ^C or Product model ^C
Range	resourceODP:Composition

has product component^{op}

IRI	http://w3id.org/CE0N/ontology/product/hasProductComponent
Description	hasProductComponent intends to represent that a product can have other product components.
Domain	Product model ^C
Range	Product model ^C

has product object component^{op}

IRI	http://w3id.org/CE0N/ontology/product/hasProductObjectComponent
Domain	Product object ^C
Range	Product object ^C

modelled by^{op}

IRI	http://w3id.org/CE0N/ontology/product/modelledBy
Description	modelledBy intends to represent that product objects follow particular product models.
Domain	Product object ^C
Range	Product model ^C

Datatype Properties

Composition quantity^{dp}

IRI	http://w3id.org/CE0N/ontology/product/compositionQuantity
<u>Domain</u>	resourceODP:Composition
<u>Range</u>	xsd:double

country of assembly^{dp}

IRI	http://w3id.org/CE0N/ontology/product/countryOfAssembly
<u>Sub Property Of</u>	locationOfAssembly ^{dp}

country of manufacture^{dp}

IRI	http://w3id.org/CE0N/ontology/product/countryOfManufacture
<u>Sub Property Of</u>	locationOfManufacture ^{dp}

country of origin^{dp}

IRI	http://w3id.org/CE0N/ontology/product/countryOfOrigin
<u>Sub Property Of</u>	locationOfOrigin ^{dp}

has certificate^{dp}

IRI	http://w3id.org/CE0N/ontology/product/hasCertificate
<u>Domain</u>	Compliance ^c

location of assembly^{dp}

IRI	http://w3id.org/CE0N/ontology/product/locationOfAssembly
<u>Super Property Of</u>	countryOfAssembly ^{dp}
<u>Domain</u>	Product object ^c or Product model ^c
<u>Range</u>	xsd:string

location of manufacture^{dp}

IRI <http://w3id.org/CE0N/ontology/product/locationOfManufacture>

Super Property Of [countryOfManufacture](#)^{dp}

Domain [Product model](#)^c or [Product object](#)^c

Range [xsd:string](#)

location of origin^{dp}

IRI <http://w3id.org/CE0N/ontology/product/locationOfOrigin>

Super Property Of [countryOfOrigin](#)^{dp}

Domain [Product object](#)^c or [Product model](#)^c

Range [xsd:string](#)

Annotation Properties

contributor^{ap}

IRI <http://purl.org/dc/terms/contributor>

created^{ap}

IRI <http://purl.org/dc/terms/created>

creator^{ap}

IRI <http://purl.org/dc/terms/creator>

description^{ap}

IRI <http://purl.org/dc/terms/description>

license^{ap}

IRI <http://purl.org/dc/terms/license>

title^{ap}

IRI <http://purl.org/dc/terms/title>

preferred namespace prefix ^{ap}	
IRI	http://purl.org/vocab/vann/preferredNamespacePrefix
preferred namespace uri ^{ap}	
IRI	http://purl.org/vocab/vann/preferredNamespaceUri
covers requirements ^{ap}	
IRI	http://www.ontologydesignpatterns.org/schemas/cannotation-schema.owl#coversRequirements

Namespaces

:	http://w3id.org/CEON/ontology/product/
actorODP	http://w3id.org/CEON/ontology/actorODP/
dcterms	http://purl.org/dc/terms/
odp	http://www.ontologydesignpatterns.org/schemas/cannotationschema.owl#
owl	http://www.w3.org/2002/07/owl#
prov	http://www.w3.org/ns/prov#
rdf	http://www.w3.org/1999/02/22-rdf-syntax-ns#
rdfs	http://www.w3.org/2000/01/rdf-schema#
resourceODP	http://w3id.org/CEON/ontology/resourceODP/
vann	http://purl.org/vocab/vann/
xsd	http://www.w3.org/2001/XMLSchema#

Legend

c	Classes
op	Object Properties
dp	Datatype Properties
ap	Annotation Properties