Circular Economy Ontology Network (CEON) - Product Module

Metadata

IRI

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

Title

Circular Economy Ontology Network (CEON) - Product Module

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Version Iri

http://w3id.org/CEON/ontology/product/0.4/

Version Info

0.4

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-ResrouceType-4, C11-2, C12-1, C13-3, E2-1, T8-3.

In addition to requirements covered by imported ODPs, covers the following requirements from Onto-DESIDE D2.3: CE5-2, 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 [C]

Process [C]

IRI	`http://w3id.org/CEON/ontology/processODP/Process`

Compliance [c]

IRI	http://w3id.org/CEON/ontology/product/Compliance
In Domain Of	complianceWith [op] hasCertificate [dp]
In Range Of	hasCompliance [op]

Item [c]

IRI	http://w3id.org/CEON/ontology/product/Item
Description	An item is a physical object put into a market for sale, i.e. corresponding to an individual of a product. The item can be a thing that grows naturally or produced through some chemical or manufacturing processes.
Sub Class Of	resourceODP:PhysicalObject [c]
In Domain Of	hasProductObjectComponent [op] modelled by [op]
In Range Of	associatedWithProductObject [op] hasProductObjectComponent [op]
Restriction	modelled by [op] *exactly* 1 Item [c]

Matter composition [c]

IRI	`http://w3id.org/CEON/ontology/product/MatterComposition`
Description	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.
Sub Class Of	resourceODP:Composition [c]
In Domain Of	associated with matter [op]
Restriction	associated with matter [op] *exactly* 1 Matter composition [c]

Product[c]

IRI	http://w3id.org/CEON/ontology/product/Product
Is Defined By	ISO 59004:2024 -3.2.2 product
Description	Physical-based object designed for or utilized with a purpose. A product can be, for example: goods of any type; hardware (e.g. engine mechanical part, spare parts, consumables); electrical or electronic hardware devices or components (e.g. computers, communication equipment and sensors); processed materials (e.g. lubricant, cement). Represents the common sense notion of a product, i.e. the abstract notion of a product type, which is a model that is used for manufacturing items of that product.
Sub Class Of	Solution[c]
In Domain Of	has product component[op]
In Range Of	associated with product model[op] batch of products[op] has product component[op] modelled by[op]

Restriction	hasComposition[op] some Product[c] hasComposition[op] some Product[c]

Product composition[c]

IRI	`http://w3id.org/CEON/ontology/product/ProductComposition`
Description	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.
Sub Class Of	resourceODP:Composition[c]
In Domain Of	associated with product model[op]
Restriction	associated with product model[op] *exactly* 1 Product composition[c]

Product Object Composition [c]

IRI	`http://w3id.org/CEON/ontology/product/ProductObjectComposition`
Sub Class Of	resourceODP:Composition [c]
In Domain Of	associatedWithProductObject [op]
Restriction	associatedWithProductObject [op] *exactly* 1 ProductObjectComposition [c]

Solution [c]

IRI	`http://w3id.org/CEON/ontology/product/Solution`
Is Defined By	ISO 59004:2024 - 3.2.1 solution
Description	Product or service, or a combination thereof, that fulfils a need of an interested party.
Super Class Of	Product [c]

Batch Of Objects [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/BatchOfObjects
In Domain Of	batch of products [op]
Restriction	batch of products [op] *exactly* 1 resourceODP:BatchOfObjects [c]

Composition [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/Composition
Sub Class Of	actorODP:ResourceRelation [c]
In Domain Of	compositionOf [op] Composition quantity [dp]
In Range Of	hasComposition [op]
Super Class Of	Matter composition [c] Product composition [c] ProductObjectComposition [c]

Matter [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/Matter
In Range Of	associated with matter [op]

Physical Object [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/PhysicalObject
Super Class Of	Item [c]

Object Properties

associated with matter [op]

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

associated with product model [op]

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

associated with product object [op]

IRI	http://w3id.org/CEON/ontology/product/associatedWithProductObject
Sub Property Of	topObjectProperty [op]
Domain	ProductObjectComposition [c]
Range	Item [c]

batch of products [op]

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

compliance with [op]

IRI	http://w3id.org/CEON/ontology/product/complianceWith
Domain	Compliance [c]

composition of [op]

IRI	http://w3id.org/CEON/ontology/product/compositionOf
Domain	resourceODP:Composition [c]
Range	resourceODP:Matter [c] *or* Product [c] *or* Item [c]

has compliance op

IRI	http://w3id.org/CEON/ontology/product/hasCompliance
Domain	Item c *or* http://w3id.org/CEON/ontology/processODP/Process c *or* actorODP:Actor c *or* Product c
Range	Compliance c

has composition op

IRI	http://w3id.org/CEON/ontology/product/hasComposition
Description	hasComposition intends to represent that a product model or physical object can have compostition information.
Domain	Product c *or* resourceODP:PhysicalObject c
Range	resourceODP:Composition c

has product component op

IRI	http://w3id.org/CEON/ontology/product/hasProductComponent
Description	hasProductComponent intends to represent that a product can have other product components.
Domain	Product c
Range	Product c

has product object component op

IRI	http://w3id.org/CEON/ontology/product/hasProductObjectComponent
Domain	Item c
Range	Item c

modelled by op

IRI	http://w3id.org/CEON/ontology/product/modelledBy
Description	modelledBy intends to represent that product objects follow particular product models.
Domain	Item c
Range	Product c

Datatype Properties

Composition quantity dp

IRI	http://w3id.org/CEON/ontology/product/compositionQuantity
Domain	resourceODP:Composition c
Range	xsd:double

country of assembly dp

IRI	http://w3id.org/CEON/ontology/product/countryOfAssembly
Sub Property Of	locationOfAssembly dp

country of manufacture dp

IRI	http://w3id.org/CEON/ontology/product/countryOfManufacture
Sub Property Of	locationOfManufacture dp

country of origin dp

IRI	http://w3id.org/CEON/ontology/product/countryOfOrigin
Sub Property Of	locationOfOrigin dp

has certificate dp

IRI	http://w3id.org/CEON/ontology/product/hasCertificate
Domain	Compliance c

location of assembly dp

IRI	http://w3id.org/CEON/ontology/product/locationOfAssembly
Super Property Of	countryOfAssembly dp
Domain	Item c *or* Product c
Range	xsd:string

location of manufacture dp

IRI	`http://w3id.org/CEON/ontology/product/locationOfManufacture`
Super Property Of	countryOfManufacture dp
Domain	Item c *or* Product c
Range	xsd:string

location of origin dp

IRI	`http://w3id.org/CEON/ontology/product/locationOfOrigin`
Super Property Of	countryOfOrigin dp
Domain	Item c *or* Product 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/cpannotationschema.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/cpannotationschema.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#

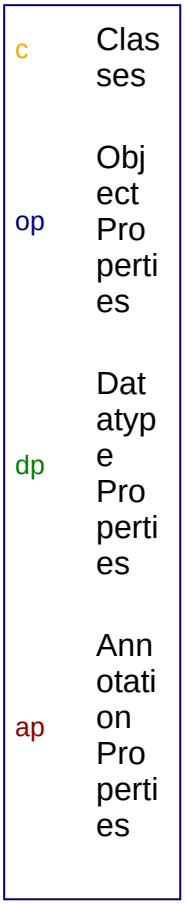
resourceODP

http://w3id.org/CEON/ontology/resourceODP/

vann

http://purl.org/vocab/vann/

xsd

http://www.w3.org/2001/XMLSchema#

Legend