

# 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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### License

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### Version Iri

<http://w3id.org/CEON/ontology/product/0.2/>

### Version Info

0.2

### 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.

## Classes

## Matter composition<sup>C</sup>

**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](#)

**In Domain Of** [associated with matter](#)<sup>OP</sup>

**Restriction** [associated with matter](#)<sup>OP</sup> *exactly* 1 [Matter composition](#)<sup>C</sup>

## Product model<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/product/Product>

**Description** 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.

**In Range Of** [associated with product model](#)<sup>OP</sup>  
[batch of products](#)<sup>OP</sup>  
[modelled by](#)<sup>OP</sup>

**Restriction** [has composition](#)<sup>OP</sup> some [Product model](#)<sup>C</sup>  
[has composition](#)<sup>OP</sup> some [Product model](#)<sup>C</sup>

## Product composition<sup>C</sup>

**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](#)

**In Domain Of** [associated with product model](#)<sup>OP</sup>

**Restriction** [associated with product model](#)<sup>OP</sup> *exactly* 1 [Product composition](#)<sup>C</sup>

## Product object<sup>c</sup>

**IRI** <http://w3id.org/CEON/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** [has product component](#)<sup>op</sup>  
[modelled by](#)<sup>op</sup>

**In Range Of** [has product component](#)<sup>op</sup>

**Restriction** [modelled by](#)<sup>op</sup> *exactly* 1 [Product object](#)<sup>c</sup>

## Object Properties

### associated with matter<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/product/associatedWithMatter>

### Description

associatedWithMatter intends to represent the matter to which a matter composition information regards to.

**Domain** [Matter composition](#)<sup>c</sup>

**Range** [resourceODP:Matter](#)

### associated with product model<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/product/associatedWithProductModel>

### Description

associatedWithProductModel intends to represent the matter to which a product composition information regards to.

**Domain** [Product composition](#)<sup>c</sup>

**Range** [Product model](#)<sup>c</sup>

## batch of products<sup>op</sup>

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**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](#)

**Range** [Product model](#)<sup>c</sup>

## has composition<sup>op</sup>

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**IRI** <http://w3id.org/CEON/ontology/product/hasComposition>

**Description** hasComposition intends to represent that a product model or physical object can have composition information.

**Domain** [resourceODP:PhysicalObject](#)<sup>c</sup> or [Product model](#)<sup>c</sup>

**Range** [resourceODP:Composition](#)

## has product component<sup>op</sup>

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**IRI** <http://w3id.org/CEON/ontology/product/hasProductComponent>

**Description** hasProductComponent intends to represent that a product can have other product components.

**Domain** [Product object](#)<sup>c</sup>

**Range** [Product object](#)<sup>c</sup>

## modelled by<sup>op</sup>

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**IRI** <http://w3id.org/CEON/ontology/product/modelledBy>

**Description** modelledBy intends to represent that product objects follow particular product models.

**Domain** [Product object](#)<sup>c</sup>

**Range** [Product model](#)<sup>c</sup>

## Datatype Properties

Composition quantity <sup>dp</sup>	
<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/product/compositionQuantity">http://w3id.org/CEON/ontology/product/compositionQuantity</a>
<b>Description</b>	compositionQuantity intends to represent the quantity value of composed elements of a composition. The quantity value can be the number of a element or the percentage of a element.
<b>Domain</b>	<a href="#">resourceODP:Composition</a>
<b>Range</b>	<a href="#">xsd:positiveInteger</a> <sup>C</sup> or <a href="#">xsd:double</a> <sup>C</sup>

## Annotation Properties

contributor <sup>ap</sup>	
<b>IRI</b>	<a href="http://purl.org/dc/terms/contributor">http://purl.org/dc/terms/contributor</a>
created <sup>ap</sup>	
<b>IRI</b>	<a href="http://purl.org/dc/terms/created">http://purl.org/dc/terms/created</a>
creator <sup>ap</sup>	
<b>IRI</b>	<a href="http://purl.org/dc/terms/creator">http://purl.org/dc/terms/creator</a>
description <sup>ap</sup>	
<b>IRI</b>	<a href="http://purl.org/dc/terms/description">http://purl.org/dc/terms/description</a>
license <sup>ap</sup>	
<b>IRI</b>	<a href="http://purl.org/dc/terms/license">http://purl.org/dc/terms/license</a>
title <sup>ap</sup>	
<b>IRI</b>	<a href="http://purl.org/dc/terms/title">http://purl.org/dc/terms/title</a>

preferred namespace prefix<sup>ap</sup>

**IRI** <http://purl.org/vocab/vann/preferredNamespacePrefix>

preferred namespace uri<sup>ap</sup>

**IRI** <http://purl.org/vocab/vann/preferredNamespaceUri>

covers requirements<sup>ap</sup>

**IRI** <http://www.ontologydesignpatterns.org/schemas/cannotationschema.owl#coversRequirements>

## Namespaces

:

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

**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