

# Circular Economy Ontology Network (CEON) - Construction Module

## Metadata

**IRI**

<http://w3id.org/CEON/demo/construction/>

**Title**

Circular Economy Ontology Network (CEON) - Construction Module

**Publisher**

Onto-DESIDE

**Creator**

Robin Keskisärkkä

**Contributor**

Eva Blomqvist

Huanyu Li

Mikael Lindecrantz

**Date Created**

2023-09-14

**Date Issued**

2025-06-30

**License**

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

**Version Iri**

<http://w3id.org/CEON/demo/construction/0.2/>

**Version Info**

0.2

**Prior Version**

0.1

**Preferred Namespace Prefix**

ceon-demo-construction

**Preferred Namespace Uri**

<http://w3id.org/CEON/demo/construction/>

**Description**

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

## Classes

Condition <sup>C</sup>	
IRI	<a href="http://w3id.org/CEON/demo/construction/Condition">http://w3id.org/CEON/demo/construction/Condition</a>
In Range Of	<a href="#">defineResourceCondition</a> <sup>op</sup> <a href="#">hasCondition</a> <sup>op</sup>
Super Class Of	<a href="#">FloorTileCondition</a> <sup>C</sup>

## Contaminant<sup>C</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/Contaminant>

**In Range Of** [hasContaminant<sup>OP</sup>](#)

## Dimensional Deviation<sup>C</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/DimensionalDeviation>

**In Range Of** [hasDimensionalDeviation<sup>OP</sup>](#)

## Fire Resistance Rating<sup>C</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/FireResistanceRating>

**In Range Of** [hasFireResistanceRating<sup>OP</sup>](#)

**Named Individuals**  
[E30<sup>ni</sup>](#)  
[E60<sup>ni</sup>](#)

## Fire Resistance Relation<sup>C</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/FireResistanceRelation>

**Sub Class Of** [actorODP:ResourceParticipation](#)

## Floor Tile<sup>C</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/FloorTile>

**Sub Class Of** [product:Product](#)

## Floor Tile Condition<sup>C</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/FloorTileCondition>

**Sub Class Of** [Condition<sup>C</sup>](#)

**Named Individuals**  
[bad\\_condition<sup>ni</sup>](#)  
[good\\_condition<sup>ni</sup>](#)  
[medium\\_condition<sup>ni</sup>](#)

## Floor Tile Condition Relation<sup>C</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/FloorTileConditionRelation>

**Sub Class Of** [actorODP:ResourceParticipation](#)

## Galvanized Steel Material<sup>C</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/GalvanizedSteelMaterial>

**Sub Class Of** [material:Material](#)

## Policy On Treatment<sup>C</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/PolicyOnTreatment>

**In Range Of** [policyOnTreatment](#)<sup>op</sup>

**Named Individuals**  
[refurbish](#)<sup>ni</sup>  
[reprocess](#)<sup>ni</sup>  
[reuse](#)<sup>ni</sup>

## Product Quality<sup>C</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/ProductQuality>

**In Range Of**  
[defineResourceQuality](#)<sup>op</sup>  
[hasProductQuality](#)<sup>op</sup>

**Named Individuals**  
[product\\_quality\\_high](#)<sup>ni</sup>  
[product\\_quality\\_low](#)<sup>ni</sup>  
[product\\_quality\\_medium](#)<sup>ni</sup>

## Treatment Policy<sup>C</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/TreatmentPolicy>

**Named Individuals**  
[refurbish](#)<sup>ni</sup>  
[reprocess](#)<sup>ni</sup>  
[reuse](#)<sup>ni</sup>

## Object Properties

associated process for lca<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/associatedProcessForLCA>

define resource condition<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/defineResourceCondition>

**Domain** [actorODP:Actor](#)

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

define resource quality<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/defineResourceQuality>

**Domain** [actorODP:Actor](#)

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

has condition<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasCondition>

**Sub Property Of** [topObjectProperty<sup>op</sup>](#)

**Domain** [product:Item<sup>c</sup>](#) or [product:Product<sup>c</sup>](#)

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

has contaminant<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasContaminant>

**Domain** [product:Product](#)

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

has dimension<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasDimension>

**Sub Property Of** <http://qudt.org/schema/qudt/quantityValue>

**Super Property Of**

- [hasHeight<sup>op</sup>](#)
- [hasThickness<sup>op</sup>](#)
- [hasWidth<sup>op</sup>](#)

**Domain** [product:Product<sup>c</sup>](#) or [product:Item<sup>c</sup>](#)

## has dimensional deviation<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasDimensionalDeviation">http://w3id.org/CE0N/demo/construction/hasDimensionalDeviation</a>
<b>Sub Property Of</b>	<a href="#">topObjectProperty<sup>op</sup></a>
<b>Domain</b>	<a href="#">product:Product</a>
<b>Range</b>	<a href="#">DimensionalDeviation<sup>c</sup></a>

## has distance to recycling plant<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasDistanceToRecyclingPlant">http://w3id.org/CE0N/demo/construction/hasDistanceToRecyclingPlant</a>
<b>Sub Property Of</b>	<a href="http://qudt.org/schema/qudt/quantityValue">http://qudt.org/schema/qudt/quantityValue</a>

## has fire resistance rating<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasFireResistanceRating">http://w3id.org/CE0N/demo/construction/hasFireResistanceRating</a>
<b>Sub Property Of</b>	<a href="#">topObjectProperty<sup>op</sup></a>
<b>Domain</b>	<a href="#">product:Product<sup>c</sup></a> or <a href="#">product:Item<sup>c</sup></a>
<b>Range</b>	<a href="#">FireResistanceRating<sup>c</sup></a>

## has height<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasHeight">http://w3id.org/CE0N/demo/construction/hasHeight</a>
<b>Sub Property Of</b>	<a href="#">hasDimension<sup>op</sup></a>

## has market value for new product<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasMarketValueForNewProduct">http://w3id.org/CE0N/demo/construction/hasMarketValueForNewProduct</a>
<b>Sub Property Of</b>	<a href="#">quantity:hasMarketValue<sup>op</sup></a>
<b>Domain</b>	<a href="#">product:Product</a>

## has market value for reused product<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasMarketValueForReusedProduct">http://w3id.org/CE0N/demo/construction/hasMarketValueForReusedProduct</a>
<b>Sub Property Of</b>	<a href="#">quantity:hasMarketValue<sup>op</sup></a>
<b>Domain</b>	<a href="#">product:Product</a>

has product quality<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasProductQuality">http://w3id.org/CE0N/demo/construction/hasProductQuality</a>
<b>Sub Property Of</b>	<a href="#">topObjectProperty<sup>op</sup></a>
<b>Domain</b>	<a href="#">product:Item<sup>c</sup></a> or <a href="#">product:Product<sup>c</sup></a>
<b>Range</b>	<a href="#">ProductQuality<sup>c</sup></a>

has recycling potential<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasRecyclingPotential">http://w3id.org/CE0N/demo/construction/hasRecyclingPotential</a>
<b>Sub Property Of</b>	<a href="http://qudt.org/schema/qudt/quantityValue">http://qudt.org/schema/qudt/quantityValue</a>
<b>Domain</b>	<a href="#">product:Product<sup>c</sup></a> or <a href="#">product:Item<sup>c</sup></a>

has recycling separability<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasRecyclingSeparability">http://w3id.org/CE0N/demo/construction/hasRecyclingSeparability</a>
<b>Sub Property Of</b>	<a href="http://qudt.org/schema/qudt/quantityValue">http://qudt.org/schema/qudt/quantityValue</a>
<b>Domain</b>	<a href="#">product:Product<sup>c</sup></a> or <a href="#">product:Item<sup>c</sup></a>

has resistance to earth<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasResistanceToEarth">http://w3id.org/CE0N/demo/construction/hasResistanceToEarth</a>
<b>Sub Property Of</b>	<a href="http://qudt.org/schema/qudt/quantityValue">http://qudt.org/schema/qudt/quantityValue</a>
<b>Domain</b>	<a href="#">product:Product</a>

has reuse deconstructability<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasReuseDeconstructability">http://w3id.org/CE0N/demo/construction/hasReuseDeconstructability</a>
<b>Sub Property Of</b>	<a href="http://qudt.org/schema/qudt/quantityValue">http://qudt.org/schema/qudt/quantityValue</a>
<b>Domain</b>	<a href="#">product:Product</a>

has system weight<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasSystemWeight">http://w3id.org/CE0N/demo/construction/hasSystemWeight</a>
<b>Sub Property Of</b>	<a href="http://qudt.org/schema/qudt/quantityValue">http://qudt.org/schema/qudt/quantityValue</a>
<b>Domain</b>	<a href="#">product:Item<sup>c</sup></a> or <a href="#">product:Product<sup>c</sup></a>

has thickness<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasThickness>

**Sub Property Of** [hasDimension<sup>op</sup>](#)

has use span<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasUseSpan>

**Sub Property Of** <http://qudt.org/schema/qudt/quantityValue>

**Super Property Of**

- [hasUseSpanRemaining<sup>op</sup>](#)
- [hasUseSpanTotal<sup>op</sup>](#)

**Domain** [product:Product<sup>c</sup>](#) or [product:Item<sup>c</sup>](#)

has use span remaining<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasUseSpanRemaining>

**Sub Property Of** [hasUseSpan<sup>op</sup>](#)

has use span total<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasUseSpanTotal>

**Sub Property Of** [hasUseSpan<sup>op</sup>](#)

has width<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasWidth>

**Sub Property Of** [hasDimension<sup>op</sup>](#)

installation location<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/installationLocation>

**Sub Property Of** [topObjectProperty<sup>op</sup>](#)

policy on treatment<sup>op</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/policyOnTreatment>

**Sub Property Of** [topObjectProperty<sup>op</sup>](#)

**Domain** [product:Product](#)

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

has market value<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/quantity#hasMarketValue>

**Super Property Of**

- [hasMarketValueForNewProduct](#)<sup>op</sup>
- [hasMarketValueForReusedProduct](#)<sup>op</sup>

## Datatype Properties

construction year<sup>dp</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/constructionYear>

**Sub Property Of** [topDataProperty](#)<sup>dp</sup>

**Range** [xsd:gYear](#)

has accessories<sup>dp</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasAccessories>

**Domain** [product:Item](#)<sup>c</sup> or [product:Product](#)<sup>c</sup>

**Range** [xsd:string](#)

has dismantling instruction<sup>dp</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasDismantlingInstruction>

**Sub Property Of** [topDataProperty](#)<sup>dp</sup>

**Range** [xsd:anyURI](#)

has dismantling method<sup>dp</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasDismantlingMethod>

**Sub Property Of** [topDataProperty](#)<sup>dp</sup>

**Domain** [product:Item](#)<sup>c</sup> or [product:Product](#)<sup>c</sup>

**Range** [xsd:string](#)



has installation date<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasInstallationDate">http://w3id.org/CE0N/demo/construction/hasInstallationDate</a>
<b><u>Sub Property Of</u></b>	<a href="#">topDataProperty</a> <sup>dp</sup>
<b><u>Domain</u></b>	<a href="#">product:Item</a>
<b><u>Range</u></b>	<a href="#">xsd:date</a>

has packaging recommendations after dismantling<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasPackagingRecommendationsAfterDismantling">http://w3id.org/CE0N/demo/construction/hasPackagingRecommendationsAfterDismantling</a>
<b><u>Sub Property Of</u></b>	<a href="#">topDataProperty</a> <sup>dp</sup>
<b><u>Domain</u></b>	<a href="#">product:Product</a> <sup>c</sup> or <a href="#">product:Item</a> <sup>c</sup>
<b><u>Range</u></b>	<a href="#">xsd:string</a>

has product description<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasProductDescription">http://w3id.org/CE0N/demo/construction/hasProductDescription</a>
<b><u>Sub Property Of</u></b>	<a href="#">topDataProperty</a> <sup>dp</sup>
<b><u>Domain</u></b>	<a href="#">product:Product</a> <sup>c</sup> or <a href="#">product:Item</a> <sup>c</sup>
<b><u>Range</u></b>	<a href="#">xsd:string</a>

has product id<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasProductID">http://w3id.org/CE0N/demo/construction/hasProductID</a>
<b><u>Sub Property Of</u></b>	<a href="#">topDataProperty</a> <sup>dp</sup>
<b><u>Domain</u></b>	<a href="#">product:Item</a> <sup>c</sup> or <a href="#">product:Product</a> <sup>c</sup>
<b><u>Range</u></b>	<a href="#">xsd:int</a>

has production date<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasProductionDate">http://w3id.org/CE0N/demo/construction/hasProductionDate</a>
<b><u>Sub Property Of</u></b>	<a href="#">topDataProperty</a> <sup>dp</sup>
<b><u>Domain</u></b>	<a href="#">product:Item</a>
<b><u>Range</u></b>	<a href="#">xsd:date</a>

has production site<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasProductionSite">http://w3id.org/CE0N/demo/construction/hasProductionSite</a>
<b>Sub Property Of</b>	<a href="#">topDataProperty</a> <sup>dp</sup>
<b>Domain</b>	<a href="#">product:Product</a> <sup>c</sup> or <a href="#">product:Item</a> <sup>c</sup>
<b>Range</b>	<a href="#">xsd:string</a>

has refurbishment method<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasRefurbishmentMethod">http://w3id.org/CE0N/demo/construction/hasRefurbishmentMethod</a>
<b>Sub Property Of</b>	<a href="#">topDataProperty</a> <sup>dp</sup>
<b>Domain</b>	<a href="#">product:Product</a> <sup>c</sup> or <a href="#">product:Item</a> <sup>c</sup>
<b>Range</b>	<a href="#">xsd:string</a>

has take back program from original manufacturer<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasTakeBackProgramFromOriginalManufacturer">http://w3id.org/CE0N/demo/construction/hasTakeBackProgramFromOriginalManufacturer</a>
<b>Sub Property Of</b>	<a href="#">topDataProperty</a> <sup>dp</sup>
<b>Domain</b>	<a href="#">product:Product</a>
<b>Range</b>	<a href="#">xsd:boolean</a>

has take back program other manufacturer<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasTakeBackProgramOtherManufacturer">http://w3id.org/CE0N/demo/construction/hasTakeBackProgramOtherManufacturer</a>
<b>Sub Property Of</b>	<a href="#">topDataProperty</a> <sup>dp</sup>
<b>Domain</b>	<a href="#">product:Product</a>
<b>Range</b>	<a href="#">xsd:boolean</a>

has technical requirements for take back for recycling<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/demo/construction/hasTechnicalRequirementsForTakeBackForRecycling">http://w3id.org/CE0N/demo/construction/hasTechnicalRequirementsForTakeBackForRecycling</a>
<b>Sub Property Of</b>	<a href="#">topDataProperty</a> <sup>dp</sup>
<b>Domain</b>	<a href="#">product:Product</a> <sup>c</sup> or <a href="#">product:Item</a> <sup>c</sup>
<b>Range</b>	<a href="#">xsd:string</a>

has technical requirements for take back for reuse<sup>dp</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/hasTechnicalRequirementsForTakeBackForReuse>

**Sub Property Of** [topDataProperty](#)<sup>dp</sup>

**Domain** [product:Item](#)<sup>c</sup> or [product:Product](#)<sup>c</sup>

**Range** [xsd:string](#)

is contaminated<sup>dp</sup>

**IRI** <http://w3id.org/CE0N/demo/construction/isContaminated>

**Sub Property Of** [topDataProperty](#)<sup>dp</sup>

**Domain** [product:Product](#)<sup>c</sup> or [product:Item](#)<sup>c</sup>

**Range** [xsd:boolean](#)

## Annotation Properties

issued<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/issued>

publisher<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/publisher>

## Namespaces

:

<http://w3id.org/CE0N/demo/construction/>

**actor**

<http://w3id.org/CE0N/ontology/actor/>

**actorODP**

<http://w3id.org/CE0N/ontology/actorODP/>

**datasheet**

<http://w3id.org/CE0N/ontology/datasheet/>

**dcterms**

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

**material**

<http://w3id.org/CE0N/ontology/material/>

**owl**

<http://www.w3.org/2002/07/owl#>

**product**

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

**prov**

<http://www.w3.org/ns/prov#>

**quantity**

<http://w3id.org/CEON/ontology/quantity#>

**rdf**

<http://www.w3.org/1999/02/22-rdf-syntax-ns#>

**rdfs**

<http://www.w3.org/2000/01/rdf-schema#>

**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