

Circular Economy Ontology Network (CEON) - Material Module

Metadata

IRI

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

Title

Circular Economy Ontology Network (CEON) - Material Module

Publisher

Onto-DESIDE

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Version Iri

<http://w3id.org/CEON/ontology/material/0.4/>

Version Info

0.4

Prior Version

0.3

Preferred Namespace Prefix

ceon-material

Preferred Namespace Uri

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

Description

The Material 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, C3-3, E1-3, E2-4, E5-2, T1-1, T10-2.

In addition to requirements covered by imported ODPs, covers the following requirements from Onto-DESIDE D3.2: CE5-2, C3-3, E1-1, E1-3, E1-11, E1-13, E2-4, E3-2, E3-5, E5-2, E5-4, E5-5, T1-1, T9-2, T10-2, T10-4, T22-2.

Classes

Aluminum ^c	
IRI	http://w3id.org/CEON/ontology/material/Aluminum
Sub Class Of	ChemicalElement ^c
Boron ^c	
IRI	http://w3id.org/CEON/ontology/material/Boron
Sub Class Of	ChemicalElement ^c
Cellulose ^c	
IRI	http://w3id.org/CEON/ontology/material/Cellulose
Sub Class Of	Material ^c
Cerium ^c	
IRI	http://w3id.org/CEON/ontology/material/Cerium
Sub Class Of	RareEarthElement ^c
Chemical Element ^c	
IRI	http://w3id.org/CEON/ontology/material/ChemicalElement
Sub Class Of	ChemicalSubstance ^c
Super Class Of	Aluminum ^c Boron ^c Chromium ^c Copper ^c Iron ^c Magnesium ^c Manganese ^c Nickel ^c Niobium ^c RareEarthElement ^c Silicon ^c Titanium ^c Zinc ^c

Chemical Entity^c

IRI	http://w3id.org/CEON/ontology/material/ChemicalEntity
Sub Class Of	resourceODP:Matter^c
In Range Of	hasChemicalEntity^{op}
Super Class Of	ChemicalSubstance^c MolecularEntity^c

Chemical Substance^c

IRI	http://w3id.org/CEON/ontology/material/ChemicalSubstance
Sub Class Of	ChemicalEntity^c
Super Class Of	ChemicalElement^c

Chromium^c

IRI	http://w3id.org/CEON/ontology/material/Chromium
Sub Class Of	ChemicalElement^c

Copper^c

IRI	http://w3id.org/CEON/ontology/material/Copper
Sub Class Of	ChemicalElement^c

Dysprosium^c

IRI	http://w3id.org/CEON/ontology/material/Dysprosium
Sub Class Of	RareEarthElement^c

Erbium^c

IRI	http://w3id.org/CEON/ontology/material/Erbium
Sub Class Of	RareEarthElement^c

Europium^c

IRI	http://w3id.org/CEON/ontology/material/Europium
Sub Class Of	RareEarthElement^c

Gadolinium^c

IRI <http://w3id.org/CEON/ontology/material/Gadolinium>

Sub Class Of [RareEarthElement^c](#)

Holmium^c

IRI <http://w3id.org/CEON/ontology/material/Holmium>

Sub Class Of [RareEarthElement^c](#)

Iron^c

IRI <http://w3id.org/CEON/ontology/material/Iron>

Sub Class Of [ChemicalElement^c](#)

Lanthanum^c

IRI <http://w3id.org/CEON/ontology/material/Lanthanum>

Sub Class Of [RareEarthElement^c](#)

Lutetium^c

IRI <http://w3id.org/CEON/ontology/material/Lutetium>

Sub Class Of [RareEarthElement^c](#)

Magnesium^c

IRI <http://w3id.org/CEON/ontology/material/Magnesium>

Sub Class Of [ChemicalElement^c](#)

Manganese^c

IRI <http://w3id.org/CEON/ontology/material/Manganese>

Sub Class Of [ChemicalElement^c](#)

Material^c

IRI	http://w3id.org/CEON/ontology/material/Material
Sub Class Of	resourceODP:Matter^c
In Domain Of	hasChemicalEntity^{op} hasMaterialComponent^{op}
Restriction	hasChemicalEntity^{op} some Material^c
Super Class Of	Cellulose^c

Material Component^c

IRI	http://w3id.org/CEON/ontology/material/MaterialComponent
Sub Class Of	resourceODP:Constituent^c
In Range Of	hasMaterialComponent^{op}

Molecular Entity^c

IRI	http://w3id.org/CEON/ontology/material/MolecularEntity
Sub Class Of	ChemicalEntity^c

Neodymium^c

IRI	http://w3id.org/CEON/ontology/material/Neodymium
Sub Class Of	RareEarthElement^c

Nickel^c

IRI	http://w3id.org/CEON/ontology/material/Nickel
Sub Class Of	ChemicalElement^c

Niobium^c

IRI	http://w3id.org/CEON/ontology/material/Niobium
Sub Class Of	ChemicalElement^c

Praseodymium^c

IRI	http://w3id.org/CEON/ontology/material/Praseodymium
Sub Class Of	RareEarthElement^c

Promethium^c

IRI <http://w3id.org/CEON/ontology/material/Promethium>

Sub Class Of [RareEarthElement^c](#)

Rare Earth Element^c

IRI <http://w3id.org/CEON/ontology/material/RareEarthElement>

Sub Class Of [ChemicalElement^c](#)

Super Class Of

[Cerium^c](#)
[Dysprosium^c](#)
[Erbium^c](#)
[Europium^c](#)
[Gadolinium^c](#)
[Holmium^c](#)
[Lanthanum^c](#)
[Lutetium^c](#)
[Neodymium^c](#)
[Praseodymium^c](#)
[Promethium^c](#)
[Samarium^c](#)
[Scandium^c](#)
[Tantalum^c](#)
[Terbium^c](#)
[Thulium^c](#)
[Ytterbium^c](#)
[Yttrium^c](#)

Samarium^c

IRI <http://w3id.org/CEON/ontology/material/Samarium>

Sub Class Of [RareEarthElement^c](#)

Scandium^c

IRI <http://w3id.org/CEON/ontology/material/Scandium>

Sub Class Of [RareEarthElement^c](#)

Silicon^c

IRI <http://w3id.org/CEON/ontology/material/Silicon>

Sub Class Of [ChemicalElement^c](#)

Tantalum^c

IRI http://w3id.org/CEON/ontology/material/Tantalum
Sub Class Of [RareEarthElement^c](#)

Terbium^c

IRI http://w3id.org/CEON/ontology/material/Terbium
Sub Class Of [RareEarthElement^c](#)

Thulium^c

IRI http://w3id.org/CEON/ontology/material/Thulium
Sub Class Of [RareEarthElement^c](#)

Titanium^c

IRI http://w3id.org/CEON/ontology/material/Titanium
Sub Class Of [ChemicalElement^c](#)

Ytterbium^c

IRI http://w3id.org/CEON/ontology/material/Ytterbium
Sub Class Of [RareEarthElement^c](#)

Yttrium^c

IRI http://w3id.org/CEON/ontology/material/Yttrium
Sub Class Of [RareEarthElement^c](#)

Zinc^c

IRI http://w3id.org/CEON/ontology/material/Zinc
Sub Class Of [ChemicalElement^c](#)

Constituent^c

IRI http://w3id.org/CEON/ontology/resourceODP/Constituent
Super Class Of [MaterialComponent^c](#)

Matter^c

IRI	http://w3id.org/CEON/ontology/resourceODP/Matter
Super Class Of	ChemicalEntity^c Material

Object Properties

has chemical entity^{op}

IRI	http://w3id.org/CEON/ontology/material/hasChemicalEntity
Domain	Material
Range	ChemicalEntity^c

has material component^{op}

IRI	http://w3id.org/CEON/ontology/material/hasMaterialComponent
Domain	Material
Range	MaterialComponent

Datatype Properties

anonymous formula^{dp}

IRI	http://w3id.org/CEON/ontology/material/anonymousFormula
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descriptive formula^{dp}

IRI	http://w3id.org/CEON/ontology/material/descriptiveFormula
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hill formula^{dp}

IRI	http://w3id.org/CEON/ontology/material/hillFormula
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reduced chemical formula^{dp}

IRI	http://w3id.org/CEON/ontology/material/reducedChemicalFormula
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Namespaces

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

Legend

 c	Classes
op	Object Properties
dp	Datatype Properties