

Circular Economy Ontology Network (CEON) - Material Module

Metadata

IRI

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

Title

Circular Economy Ontology Network (CEON) - Material Module

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Date Created

2023-03-16

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Version Iri

<http://w3id.org/CEON/ontology/material/0.1/>

Version Info

0.1

Preferred Namespace Prefix

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.

Classes

Chemical entity ^c	
IRI	http://w3id.org/CEON/ontology/material/ChemicalEntity
Description	A chemical entity is an abstraction of entities that can compose matter. For instance, a chemical entity can be a molecular entity or a chemical substance.
Sub Class Of	resourceODP:Matter^c
In Range Of	has chemical entity^{op}
Super Class Of	Chemical substance^c Molecular entity^c

Chemical substance^c

IRI	http://w3id.org/CEON/ontology/material/ChemicalSubstance
Description	A chemical substance is made up of a collection of molecular entities.
Sub Class Of	Chemical entity^c

Material^c

IRI	http://w3id.org/CEON/ontology/material/Material
Description	Material as a sub-concept of Matter, can be a substance or a collection of substance which a physical object is composed of.
Sub Class Of	resourceODP:Matter^c
In Domain Of	has chemical entity^{op} has material component^{op}
Restriction	has chemical entity^{op} some Material^c

Material component^c

IRI	http://w3id.org/CEON/ontology/material/MaterialComponent
Description	A material component is a part of a material.
Sub Class Of	resourceODP:Constituent^c
In Range Of	has material component^{op}

Molecular entity^c

IRI	http://w3id.org/CEON/ontology/material/MolecularEntity
Description	A molecular entity means a singular/distinguishable entity. It can be for instance, atom, ion.
Sub Class Of	Chemical entity^c

Constituent^c

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

Matter^c

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

Object Properties

has chemical entity^{op}

IRI	http://w3id.org/CEON/ontology/material/hasChemicalEntity
Description	hasChemicalEntity intends to represent that a material can have a collection of chemical entities.
Domain	Material^c
Range	Chemical entity^c

has material component^{op}

IRI	http://w3id.org/CEON/ontology/material/hasMaterialComponent
Description	hasMaterialComponent intends to represent that a material can have a collection of components.
Domain	Material^c
Range	Material component^c

Datatype Properties

Anonymous Formula^{dp}

IRI	http://w3id.org/CEON/ontology/material/AnonymousFormula
Description	AnonymousFormula represents that a molecular entity has the anonymous formula in a string.

Descriptive Formula^{dp}

IRI	http://w3id.org/CEON/ontology/material/DescriptiveFormula
Description	DescriptiveFormula represents that a molecular entity has the descriptive formula in a string.

Hill Formula^{dp}

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

Description HillFormula represents that a composition has the hill formula in a string.

Reduced Chemical Formula^{dp}

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

Description ReducedChemicalFormula represents that a molecular entity has the reduced chemical formula in a string.

Annotation Properties

description^{ap}

IRI <http://purl.org/dc/elements/1.1/description>

Namespaces

: <http://w3id.org/CEON/ontology/material/>
dc <http://purl.org/dc/elements/1.1/>
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
ap	Annotation Properties