

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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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/CEN/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/CEN/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/CEN/ontology/resourceODP/Constituent>

Super Class Of

[Material component](#)^c

Matter^c

IRI <http://w3id.org/CEN/ontology/resourceODP/Matter>

Super Class Of [Chemical entity^c](#)
[Material^c](#)

Object Properties

has chemical entity^{op}

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

Datatype Properties

Anonymous Formula^{dp}

IRI	http://w3id.org/CEN/ontology/material/AnonymousFormula
<u>Description</u>	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	Data type Properties
ap	Annotation Properties