Circular Economy Ontology Network (CEON) - Electronics Module

Metadata

IRI

http://w3id.org/CEON/demo/electronics/

Title

Circular Economy Ontology Network (CEON) - Electronics Module

Publisher

Onto-DESIDE

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Version Iri

http://w3id.org/CEON/demo/electronics/0.2/

Version Info

0.2

Prior Version

0.1

Preferred Namespace Prefix

ceon-demo-electronics

Preferred Namespace Uri

http://w3id.org/CEON/demo/electronics/

Description

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

Classes

Derived Unit ^C	
IRI	http://qudt.org/schema/qudt/DerivedUnit
Is Defined By	http://qudt.org/2.1/schema/qudt
Description	A DerivedUnit is a type specification for units that are derived from other units.
Sub Class Of	http://qudt.org/schema/qudt/Unit
Named Individuals	<u>pascal second</u> ⁿⁱ

Actinoids Metal C

Sub Class Of MetalMaterial^C

Adhesive Material ^c

IRI http://w3id.org/CEON/demo/electronics/AdhesiveMaterial

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Alkali Metal^c

Sub Class Of MetalMaterial C

Alkaline Earth Metal ^c

Sub Class Of MetalMaterial^C

Aluminum Dome Tweeter C

Sub Class Of ElectronicsProduct^C

Bromide Material^C

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Catalyst Composition C

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/product/MatterComposition

In Domain Of hasCatalystCompositionValue op

Restriction <u>hasCatalystCompositionValue</u> op only <u>CatalystComposition</u> only <u>CatalystComposition</u>

Catalyst Composition Value ^c

IRI http://w3id.org/CEON/demo/electronics/CatalystCompositionV

alue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of hasCatalystCompositionValue op

Catalyst Material^C

IRI http://w3id.org/CEON/demo/electronics/CatalystMaterial

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Chemical Element Composition ^c

sition

Sub Class Of http://gudt.org/schema/gudt/Quantity

http://qudt.org/schema/qudt/Quantity. http://w3id.org/CEON/ontology/product/MatterComposition

In Domain Of hasChemicalElementCompositionValue op

Restriction hasChemicalElementCompositionValue op only ChemicalElementComposition characteristics hasChemicalElementComposition characteristics and characteristics hasChemicalElementComposition characteristics and characteristics are characteristics and characteristics and characteristics are characteristics and characteristics are characteristics.

Chemical Element Composition Value ^C

http://w3id.org/CEON/demo/electronics/ChemicalElementCompo

 $\operatorname{sitionValue}$

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of hasChemicalElementCompositionValue op

Restriction http://qudt.org/schema/qudt/hasUnit value

<u>ChemicalElementCompositionValue^C</u>

Conductivity ^C

Sub Class Of http://gudt.org/schema/gudt/Ouantity

http://qudt.org/schema/qudt/Quantity. http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasConductivityValue^{op}

In Range Of hasConductivity op

Restriction <u>hasConductivityValue</u> op only <u>Conductivity</u> only <u>Conductivity</u>

Conductivity Value ^C

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit op some http://qudt.org/schema/qudt/Unit c

and http://qudt.org/schema/qudt/hasUnit op only http://qudt.org/schema/qudt/Unit

С

In Range Of hasConductivityValue op

Restriction http://qudt.org/schema/qudt/numericValue only ConductivityValue^C

Core Material^C

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Coupling Cone^C

Sub Class Of <u>ElectronicsProduct</u>^C

Damper ^C

Sub Class Of ElectronicsProduct^C

Named Individuals damper_xni

Density At25^C

Sub Class Of http://gudt.org/schema/gudt/Quantity

http://qudt.org/schema/qudt/Quantity http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of <u>hasDensityAt25Value</u> op

In Range Of hasDensityAt25^{op}

Restriction hasDensityAt25Value op only DensityAt25 c

Density At25Value ^C

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} some http://qudt.org/schema/qudt/Unit^c and http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit

_

In Range Of hasDensityAt25Value op

Restriction http://qudt.org/schema/qudt/numericValue only DensityAt25Value only <a href="DensityAt25Value

Depth ^c

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasDepthValue op

In Range Of hasDepth^{op}

Restriction <u>hasDepthValue</u>^{op} only <u>Depth</u>^c

Depth Value ^C

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit^c

and http://qudt.org/schema/qudt/hasUnit ome

http://qudt.org/schema/qudt/Unit^C

In Range Of hasDepthValue op

Restriction http://qudt.org/schema/qudt/numericValue only DepthValue only <a hre

Diameter ^C

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasDiameterValue op

In Range Of hasDiameter op

Restriction hasDiameterValue op only Diameter c

Diameter Value ^C

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit^c

and http://qudt.org/schema/qudt/hasUnitop some

http://qudt.org/schema/qudt/Unit^c

In Range Of hasDiameterValue op

Restriction http://qudt.org/schema/qudt/numericValue only DiameterValue C

Double Magnet^C

Sub Class Of <u>ElectronicsProduct</u>^C

Super Class Of Frame^c

Electronics Product^C

Sub Class Of http://w3id.org/CEON/ontology/product/Product

Super Class Of

<u>AluminumDomeTweeter^C</u>

CouplingCone^C
Damper^C
DoubleMagnet^C
NeodymiumMagnet^C

<u>Speaker^c</u>

Electronics Product Sourcing Component Relation C

urcingComponentRelation

Sub Class Of http://w3id.org/CEON/ontology/provenance/Statement

Fastening Method^C

Named Individuals PressFitOrFriction ni

Fiber Elongation At Break^c

IRI http://w3id.org/CEON/demo/electronics/FiberElongationAtBre

ak

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of <u>hasFiberElongationAtBreakValue^op</u>

In Range Of hasFiberElongationAtBreak op

Restriction hasFiberElongationAtBreakValue^{op} only FiberElongationAtBreak^c

Fiber Elongation At Break Value ^C

IRI http://w3id.org/CEON/demo/electronics/FiberElongationAtBre

akValue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit op only http://qudt.org/schema/qudt/Unit c

and http://qudt.org/schema/qudt/hasUnit op some

http://qudt.org/schema/qudt/Unit^c

In Range Of hasFiberElongationAtBreakValue op

Restriction http://qudt.org/schema/qudt/numericValue only FiberElongationAtBreakValue^C

Fiber Volume Content C

IRI http://w3id.org/CEON/demo/electronics/FiberVolumeContent

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasFiberVolumeContentValue^{op}

In Range Of hasFiberVolumeContent op

Restriction <u>hasFiberVolumeContentValue op only FiberVolumeContent</u>

Fiber Volume Content Value ^C

IRI http://w3id.org/CEON/demo/electronics/FiberVolumeContentVa

lue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit^c

and http://qudt.org/schema/qudt/hasUnitop some

http://qudt.org/schema/qudt/Unit^c

In Range Of hasFiberVolumeContentValue op

Restriction http://qudt.org/schema/qudt/numericValue only FiberVolumeContentValue only

Fibre Material ^c

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Flame Retardant Material ^C

IRI http://w3id.org/CEON/demo/electronics/FlameRetardantMateri

al

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Frame ^c

Sub Class Of DoubleMagnet^C

Hardener Material^C

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Hazardous Material Percentage ^C

IRI http://w3id.org/CEON/demo/electronics/HazardousMaterialPer

centage

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of hasHazardousMaterial op

Restriction

http://qudt.org/schema/qudt/hasUnit^{op} value <u>HazardousMaterialPercentage</u>^c

http://qudt.org/schema/qudt/numericValue_only_HazardousMaterialPercentage_0

Lca Acidification ^C

IRI http://w3id.org/CEON/demo/electronics/LCAAcidification

Sub Class Of LCAValue^C

http://qudt.org/schema/qudt/hasUnit^{op} only LCAUnit^c and http://qudt.org/schema/qudt/hasUnit^{op} some LCAUnit^c

Restriction http://qudt.org/schema/qudt/numericValue only LCAAcidification^C

Lca Climate Change ^C

Sub Class Of

<u>LCAValue</u>^c

http://qudt.org/schema/qudt/hasUnit^{op} some LCAUnit^c and http://qudt.org/schema/qudt/hasUnit^{op} only LCAUnit^c

Restriction http://qudt.org/schema/qudt/numericValue only LCAClimateChange^C

Lca Climate Change Biogenic^C

IRI http://w3id.org/CEON/demo/electronics/LCAClimateChangeBiog

enic

Sub Class Of

LCAValue^c

http://qudt.org/schema/qudt/hasUnit^{op} some LCAUnit^c and http://qudt.org/schema/qudt/hasUnit^{op} only LCAUnit^c

Restriction http://gudt.org/schema/gudt/numericValue only LCAClimateChangeBiogenic^C

Lca Climate Change Fossil^c

IRI http://w3id.org/CEON/demo/electronics/LCAClimateChangeFoss

il

Sub Class Of LCAValue^C

http://qudt.org/schema/qudt/hasUnit^{op} only LCAUnit^c and http://qudt.org/schema/qudt/hasUnit^{op} some LCAUnit^c

Restriction http://qudt.org/schema/qudt/numericValue only LCAClimateChangeFossil^C

Lca Ecotoxicity Fresh Water ^c

ater

Sub Class Of LCAValue

http://qudt.org/schema/qudt/hasUnit^{op} only LCAUnit^c and http://qudt.org/schema/qudt/hasUnit^{op} some LCAUnit^c

Restriction http://qudt.org/schema/qudt/numericValue_only LCAEcotoxicityFreshWater^C

Lca Eutrophication Fresh Water ^c

IRI http://w3id.org/CEON/demo/electronics/LCAEutrophicationFre

shWater

Sub Class Of

<u>LCAValue</u>^C

http://qudt.org/schema/qudt/hasUnit^{op} only LCAUnit^c and http://qudt.org/schema/qudt/hasUnit^{op} some LCAUnit^c

Restriction http://qudt.org/schema/qudt/numericValue-only-LCAEutrophicationFreshWater

Lca Eutrophication Marine ^C

IRI http://w3id.org/CEON/demo/electronics/LCAEutrophicationMar

ine

Sub Class Of

LCAValue^C

http://qudt.org/schema/qudt/hasUnit^{op} some LCAUnit^c and http://qudt.org/schema/qudt/hasUnit^{op} only LCAUnit^c

Restriction http://qudt.org/schema/qudt/numericValue only LCAEutrophicationMarine^c

Lca Human Toxicity Cancer ^c

IRI http://w3id.org/CEON/demo/electronics/LCAHumanToxicityCanc

er

Sub Class Of LCAValue^C

http://qudt.org/schema/qudt/hasUnit^{op} only LCAUnit^c and http://qudt.org/schema/qudt/hasUnit^{op} some LCAUnit^c

Restriction http://qudt.org/schema/qudt/numericValue_only_LCAHumanToxicityCancer^C

Lca Lonising Radition Human Health C

IRI http://w3id.org/CEON/demo/electronics/LCALonisingRaditionH

umanHealth

Sub Class Of

LCAValue^C

http://qudt.org/schema/qudt/hasUnit^{op} some LCAUnit^c and http://qudt.org/schema/qudt/hasUnit^{op} only LCAUnit^c

Restriction http://qudt.org/schema/qudt/numericValue only

<u>LCALonisingRaditionHumanHealth</u>^c

Lca Mineral Use^C

Sub Class Of

LCAValue^C

http://qudt.org/schema/qudt/hasUnit^{op} only LCAUnit^c and http://qudt.org/schema/qudt/hasUnit^{op} some LCAUnit^c

Restriction http://qudt.org/schema/qudt/numericValue only LCAMineralUse c

Lca Unit^C

IRI http://w3id.org/CEON/demo/electronics/LCAUnit

Sub Class Of http://qudt.org/schema/qudt/Unit

Lca Value ^C

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of hasLCAValue op

Super Class Of

LCAAcidification^C

<u>LCAClimateChange</u>^C

LCAClimateChangeBiogenic^C
LCAClimateChangeFossil^C
LCAEcotoxicityFreshWater^C
LCAEutrophicationFreshWater^C
LCAEutrophicationMarine^C
LCAHumanToxicityCancer^C

<u>LCALonisingRaditionHumanHealth</u>^c

LCAMineralUse^C LCAWaterUse^C

Lca Water Use ^C

Sub Class Of

LCAValue^C

http://qudt.org/schema/qudt/hasUnit^{op} some LCAUnit^c and http://qudt.org/schema/qudt/hasUnit^{op} only LCAUnit^c

Restriction http://qudt.org/schema/qudt/numericValue-only-LCAWaterUse

Laminate Material^C

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Length ^C

IRI http://w3id.org/CEON/demo/electronics/Length

Sub Class Of

http://qudt.org/schema/qudt/Quantity. http://w3id.org/CEON/ontology/resourceODP/ResourceProperty.

In Range Of hasLength^{op}

Length Value ^C

IRI http://w3id.org/CEON/demo/electronics/LengthValue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

> http://qudt.org/schema/qudt/hasUnit op some http://qudt.org/schema/qudt/Unit c and http://qudt.org/schema/qudt/hasUnit op only http://qudt.org/schema/qudt/Unit

Restriction http://qudt.org/schema/qudt/numericValue_only_LengthValue_c

Life Span Time C

IRI http://w3id.org/CEON/demo/electronics/LifeSpanTime

Sub Class Of

http://qudt.org/schema/qudt/Quantity http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasLifeSpanTimeValue op

In Range Of hasLifeSpanTime op

Restriction hasLifeSpanTimeValue op only LifeSpanTimeC

Life Span Time Value ^C

IRI http://w3id.org/CEON/demo/electronics/LifeSpanTimeValue

http://qudt.org/schema/qudt/QuantityValue **Sub Class Of**

In Range Of hasLifeSpanTimeValue op

Restriction

http://qudt.org/schema/qudt/hasUnitop value LifeSpanTimeValue Company value Company va

http://qudt.org/schema/qudt/numericValue_only_LifeSpanTimeValueC

Material Grade ^c

http://w3id.org/CEON/demo/electronics/MaterialGrade

Named Individuals N35Hni

Matrix Additive M Aterial C

IRI http://w3id.org/CEON/demo/electronics/MatrixAdditiveMAteri

al

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Maximum Energy Product^C

Sub Class Of http://gudt.org/schema/gudt/Quantity

http://qudt.org/schema/qudt/Quantity. http://w3id.org/CEON/ontology/resourceODP/ResourceProperty.

In Domain Of hasMaximumEnergyProductValue op

In Range Of hasMaximumEnergyProduct op

Restriction hasMaximumEnergyProductValue^{op} only MaximumEnergyProduct^C

Maximum Energy Product Value ^C

IRI http://w3id.org/CEON/demo/electronics/MaximumEnergyProduct

Value

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnitop only http://qudt.org/schema/qudt/Unitop

and http://qudt.org/schema/qudt/hasUnitop some

http://qudt.org/schema/qudt/Unit^c

In Range Of hasMaximumEnergyProductValue^{op}

Restriction http://gudt.org/schema/qudt/numericValue only MaximumEnergyProductValue

Metal Composition ^C

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/product/MatterComposition

In Domain Of hasMetalCompositionValue op

Restriction hasMetalCompositionValue op only MetalComposition on only MetalComposition necessarily nec

Metal Composition Value ^C

е

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of hasMetalCompositionValue op

Metal Material^C

IRI http://w3id.org/CEON/demo/electronics/MetalMaterial

Sub Class Of <a href="http://w3id.org/CEON/ontology/material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Mater

Super Class Of

ActinoidsMetal^c
AlkaliMetal^c
AlkalineEarthMetal^c
TransitionalMetal^c

Motor Speed Type C

Named Individuals continuous variable speed ni

Motor Type ^C

Named Individuals Induction ni

Neodymium Magnet^C

Sub Class Of <u>ElectronicsProduct</u>^C

Named Individuals neodymium_magnet_xⁿⁱ

Non Metal Material^C

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Named Individuals

carbon_material_aⁿⁱ nitrogen_material_aⁿⁱ

Operating Voltage ^C

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasOperatingVoltageValue op

In Range Of hasOperatingVoltage op

Restriction <u>hasOperatingVoltageValue</u> only <u>OperatingVoltage</u> only <u>OperatingVoltage</u>

Operating Voltage Value ^c

IRI http://w3id.org/CEON/demo/electronics/OperatingVoltageValu

e

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} some http://qudt.org/schema/qudt/Unit^c and http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit

С

In Range Of <u>hasOperatingVoltageValue op</u>

Restriction http://qudt.org/schema/qudt/numericValue only OperatingVoltageValue only <a href="http://qudt.org/schema/qudt/numericVal

Post Consumer Recycled Content^C

IRI http://w3id.org/CEON/demo/electronics/PostConsumerRecycled

Content

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/product/ProductComposition

In Domain Of hasPostConsumerRecycledContentValue op

Restriction <u>hasPostConsumerRecycledContentValue</u> op only

PostConsumerRecycledContent ^C

Post Consumer Recycled Content Value C

 ${\tt ContentValue}$

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of <u>hasPostConsumerRecycledContentValue</u> op

Restriction

http://qudt.org/schema/qudt/hasUnit^{op} value PostConsumerRecycledContentValue^c http://qudt.org/schema/qudt/numericValue_only

PostConsumerRecycledContentValue^C

Post Customer Recycled Content^C

Content

Named Individuals content 1ⁿⁱ

Pre Consumer Recycled Content^c

IRI http://w3id.org/CEON/demo/electronics/PreConsumerRecycledC

ontent

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/product/ProductComposition

In Domain Of hasPreConsumerRecycledContentValue op

Restriction hasPreConsumerRecycledContentValue^{op} only PreConsumerRecycledContent

C.

Pre Consumer Recycled Content Value ^c

IRI http://w3id.org/CEON/demo/electronics/PreConsumerRecycledC

ontentValue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of <u>hasPreConsumerRecycledContentValue</u> op

Restriction

http://qudt.org/schema/qudt/hasUnitop value

<u>PreConsumerRecycledContentValue</u>^C

http://qudt.org/schema/qudt/numericValue_only

<u>PreConsumerRecycledContentValue</u>^C

Prepreg Material^C

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Rare Earth Composition ^C

Sub Class Of http://gudt.org/schema/gudt/Quantity

http://qudt.org/schema/qudt/Quantity http://w3id.org/CEON/ontology/product/MatterComposition

In Domain Of hasRareEarthCompositionValue op

Restriction hasRareEarthCompositionValue^{op} only RareEarthComposition^c

Rare Earth Composition Value C

Value

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of hasRareEarthCompositionValue op

Rare Earth Material^C

Sub Class Of <a href="http://w3id.org/CEON/ontology/material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Material/Mater

Rated Load Amps C

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasRatedLoadAmpsValue op

In Range Of hasRatedLoadAmps op

Restriction hasRatedLoadAmpsValue^{op} only RatedLoadAmps^c

Rated Load Amps Value C

IRI http://w3id.org/CEON/demo/electronics/RatedLoadAmpsValue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} some http://qudt.org/schema/qudt/Unit^c and http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit

С

In Range Of <u>hasRatedLoadAmpsValue</u>op

Restriction http://qudt.org/schema/qudt/numericValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_only_RatedLoadAmpsValue_o

Rated Power Output^C

http://w3id.org/CEON/demo/electronics/RatedPowerOutput

Sub Class Of http://guidt.org/schema/guidt/Quantity

http://qudt.org/schema/qudt/Quantity http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasRatedPowerOutputValue^{op}

In Range Of hasRatedPowerOutput op

Restriction hasRatedPowerOutputValue^{op} only RatedPowerOutput^C

Rated Power Output Value C

IRI http://w3id.org/CEON/demo/electronics/RatedPowerOutputValu

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnitop only http://qudt.org/schema/qudt/Unitop

and http://qudt.org/schema/qudt/hasUnitop some

http://qudt.org/schema/qudt/Unit^C

In Range Of hasRatedPowerOutputValue^{op}

Restriction http://qudt.org/schema/qudt/numericValue_only_RatedPowerOutputValue_c

Rated Rpm^C

IRI http://w3id.org/CEON/demo/electronics/RatedRPM

Sub Class Of

http://qudt.org/schema/qudt/Quantity http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasRatedRPMValue op

In Range Of hasRatedRPM^{op}

Restriction hasRatedRPMValue op only RatedRPMC

Rated Rpm Value ^C

IRI http://w3id.org/CEON/demo/electronics/RatedRPMValue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

> http://qudt.org/schema/qudt/hasUnit op some http://qudt.org/schema/qudt/Unit c and http://qudt.org/schema/qudt/hasUnit op only http://qudt.org/schema/qudt/Unit

In Range Of hasRatedRPMValue op

Restriction http://qudt.org/schema/qudt/numericValue_only RatedRPMValueC

Recycling Pressure^C

IRI http://w3id.org/CEON/demo/electronics/RecyclingPressure

Sub Class Of http://qudt.org/schema/qudt/Quantity

Restriction hasRecyclingPressureValue op only RecyclingPressure control new op only Recycling control new op only Recycling control new op only Recycling cont Recycling Pressure Value ^c

IRI http://w3id.org/CEON/demo/electronics/RecyclingPressureVal

ue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} some http://qudt.org/schema/qudt/Unit^c and http://qudt.org/schema/qudt/Unit^{op} only http://qudt.org/schema/qudt/Unit

С

In Range Of hasRecyclingPressureValue op

Restriction http://qudt.org/schema/qudt/numericValue only RecyclingPressureValue^C

Recycling Process Duration^C

IRI http://w3id.org/CEON/demo/electronics/RecyclingProcessDura

tion

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} some http://qudt.org/schema/qudt/Unit^c and http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit

С

In Range Of <u>hasRecyclingProcessDuration</u>op

Restriction http://qudt.org/schema/qudt/numericValue only RecyclingProcessDuration ^C

Recycling Temperature Value ^C

IRI http://w3id.org/CEON/demo/electronics/RecyclingTemperature

Value

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} some http://qudt.org/schema/qudt/Unit^c and http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit

C

In Range Of hasRecyclingProcessTemperature op

Restriction http://qudt.org/schema/qudt/numericValue only RecyclingTemperatureValue^C

Refractive Index At25^c

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Range Of hasRefractiveIndexAt25^{op}

Restriction hasRefractiveIndexAt25^{op} only RefractiveIndexAt25^c

Refractive Index At25Value C

IRI http://w3id.org/CEON/demo/electronics/RefractiveIndexAt25V

alue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnitop only http://qudt.org/schema/qudt/Unitop

and http://qudt.org/schema/qudt/hasUnitop some

http://qudt.org/schema/qudt/Unit^C

Restriction http://gudt.org/schema/gudt/numericValue-only-RefractiveIndexAt25Value

Remanent Magnetic Flux Density^c

IRI http://w3id.org/CEON/demo/electronics/RemanentMagneticFlux

Density

Sub Class Of http://gudt.org/schema/gudt/Quantity

http://qudt.org/schema/qudt/Quantity http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasRemanentMagneticFluxDensityValue op

In Range Of hasRemanentMagneticFluxDensity op

Restriction hasRemanentMagneticFluxDensityValue^{op} only RemanentMagneticFluxDensity

С

Remanent Magnetic Flux Density Value C

DensityValue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit op only http://qudt.org/schema/qudt/Unit c

and http://qudt.org/schema/qudt/hasUnitop some

http://qudt.org/schema/qudt/Unit^c

In Range Of hasRemanentMagneticFluxDensityValue op

Restriction http://qudt.org/schema/qudt/numericValue only

<u>RemanentMagneticFluxDensityValue^c</u>

Renewable Content^c

IRI http://w3id.org/CEON/demo/electronics/RenewableContent

Sub Class Of http://gudt.org/schema/gudt/Quantity

http://qudt.org/schema/qudt/Quantity http://w3id.org/CEON/ontology/product/ProductComposition

In Domain Of hasRenewableContentValue^{op}

Restriction hasRenewableContentValue op only RenewableContentC

Renewable Content Value ^C

IRI http://w3id.org/CEON/demo/electronics/RenewableContentValu

е

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of hasRenewableContentValue op

Restriction

http://qudt.org/schema/qudt/hasUnit^{op} value RenewableContentValue^c http://qudt.org/schema/qudt/numericValue only RenewableContentValue^c

Resin Material ^C

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Resistivity ^C

Sub Class Of http://gudt.org/schema/gudt/Quantity

http://qudt.org/schema/qudt/Quantity. http://w3id.org/CEON/ontology/resourceODP/ResourceProperty.

In Domain Of hasResistivityValue op

Restriction <u>hasResistivityValue</u> op only <u>Resistivity</u> only <u>Resistivity</u>

Resistivity Value^C

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of hasResistivityValue op

Restriction http://qudt.org/schema/qudt/numericValue only ResistivityValue^C

Shape ^C

Sub Class Of http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Range Of hasShape op

Named Individuals cylinderⁿⁱ

Shear Strength ^C

IRI http://w3id.org/CEON/demo/electronics/ShearStrength

Sub Class Of

http://qudt.org/schema/qudt/Quantity. http://w3id.org/CEON/ontology/resourceODP/ResourceProperty.

In Domain Of hasShearStrengthValue op

In Range Of hasShearStrength op

Restriction hasShearStrengthValue op only ShearStrengthC

Shear Strength Value ^C

IRI http://w3id.org/CEON/demo/electronics/ShearStrengthValue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit op only http://qudt.org/schema/qudt/Unit c

and http://qudt.org/schema/qudt/hasUnit op some

http://qudt.org/schema/qudt/Unit^c

In Range Of hasShearStrengthValue op

Restriction http://qudt.org/schema/qudt/numericValue only ShearStrengthValue C

Speaker ^c

IRI http://w3id.org/CEON/demo/electronics/Speaker

Sub Class Of ElectronicsProduct^C

Named Individuals speaker xni

Stiffness ^C

IRI http://w3id.org/CEON/demo/electronics/Stiffness

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasStiffnessValue op

In Range Of hasStiffness^{op}

Restriction hasStiffnessValue op only Stiffness c Stiffness Value C

IRI http://w3id.org/CEON/demo/electronics/StiffnessValue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

 $\underline{\text{http://qudt.org/schema/qudt/hasUnit}}^{op} \ \text{some} \ \underline{\text{http://qudt.org/schema/qudt/Unit}}^{c}$

and http://qudt.org/schema/qudt/hasUnit op only http://qudt.org/schema/qudt/Unit

С

In Range Of hasStiffnessValue op

Restriction http://qudt.org/schema/qudt/numericValue only StiffnessValue^C

Surface Finish Material C

ι

Sub Class Of http://w3id.org/CEON/ontology/material/Material

Tensile Modulus^C

IRI http://w3id.org/CEON/demo/electronics/TensileModulus

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasTensileModulusValue op

In Range Of hasTensileModulus op

Restriction <u>hasTensileModulusValue</u>^{op} only <u>TensileModulus</u>^c

Tensile Modulus Value ^C

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} some http://qudt.org/schema/qudt/Unit^c and http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit

С

In Range Of hasTensileModulusValue op

Restriction http://qudt.org/schema/qudt/numericValue only TensileModulusValue^C

Tensile Strength ^C

Sub Class Of

http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasTensileStrengthValue^{op}

In Range Of hasTensileStrengthop

Restriction hasTensileStrengthValue^{op} only TensileStrength^c

Tensile Strength Value ^C

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} some http://qudt.org/schema/qudt/Unit^c and http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit

С

In Range Of hasTensileStrengthValue op

Restriction http://qudt.org/schema/qudt/numericValue only TensileStrengthValue only

Transition Temperature ^C

e

Sub Class Of http://gudt.org/schema/gudt/Quantity

http://qudt.org/schema/qudt/Quantity. http://w3id.org/CEON/ontology/resourceODP/ResourceProperty.

In Domain Of hasTransitionTemperatureValue op

In Range Of <u>hasTransitionTemperature op</u>

Restriction hasTransitionTemperatureValue^{op} only TransitionTemperature^c

Transition Temperature Value ^C

eValue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnitop only http://qudt.org/schema/qudt/Unitop

and http://qudt.org/schema/qudt/hasUnit op some

http://qudt.org/schema/qudt/Unit^c

In Range Of hasTransitionTemperatureValue^{op}

Restriction http://qudt.org/schema/qudt/numericValue only TransitionTemperatureValue on the first of the first of the first of the first only TransitionTemperatureValue on the first of the first of the first only TransitionTemperatureValue on the first of the first of the first only TransitionTemperatureValue on the first of the first of the first of the first only TransitionTemperatureValue on the first of the fir

Transitional Metal^C

Sub Class Of MetalMaterial^C

Unknown Acute Toxicity Percentage ^c

IRI http://w3id.org/CEON/demo/electronics/UnknownAcuteToxicity

Percentage

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of hasUnknownAcuteToxicity op

Restriction

http://qudt.org/schema/qudt/hasUnit^{op} value <u>UnknownAcuteToxicityPercentage</u>^c

http://qudt.org/schema/qudt/numericValue_only

<u>UnknownAcuteToxicityPercentage^C</u>

Virgin Fosil Content^c

In Domain Of <u>hasVirginFosilContentValue^op</u>

Virgin Fosil Content Value ^c

Lue

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

In Range Of hasVirginFosilContentValue op

Restriction

http://qudt.org/schema/qudt/hasUnit^{op} value VirginFosilContentValue^C

http://qudt.org/schema/qudt/numericValue_only_VirginFosilContentValue_c

Virgin Fossil Content^C

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/product/ProductComposition

Restriction hasVirginFosilContentValue op only VirginFossilContent c

Viscosity At25^c

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Domain Of hasViscosityAt25Value op

In Range Of hasViscosityAt25 op

Restriction has Viscosity At 25 Value op only Viscosity At 25 C

Viscosity At25Value ^c

IRI http://w3id.org/CEON/demo/electronics/ViscosityAt25Value

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit^c

and http://qudt.org/schema/qudt/hasUnit ome

http://qudt.org/schema/qudt/Unit^c

In Range Of hasViscosityAt25Value op

Restriction http://qudt.org/schema/qudt/numericValue only ViscosityAt25Value^C

Width ^C

IRI http://w3id.org/CEON/demo/electronics/Width

Sub Class Of http://qudt.org/schema/qudt/Quantity

http://w3id.org/CEON/ontology/resourceODP/ResourceProperty

In Range Of hasWidth op

Width Value C

Sub Class Of http://qudt.org/schema/qudt/QuantityValue

http://qudt.org/schema/qudt/hasUnit^{op} some http://qudt.org/schema/qudt/Unit^c and http://qudt.org/schema/qudt/hasUnit^{op} only http://qudt.org/schema/qudt/Unit

С

Restriction http://qudt.org/schema/qudt/numericValue only WidthValue^C

Issuing Resource C

Named Individuals ds_issue_1ni

Process Participation ^C

Named Individuals s63ⁿⁱ

Producing Resource^C

Named Individuals

<u>ss 1ⁿⁱ</u> <u>ss 2ⁿⁱ</u> <u>ss 3ⁿⁱ</u>

Supplying Resource^C

Named Individuals 87ⁿⁱ

Actor ^C

Named Individuals

Mⁿⁱ
company aⁿⁱ
company bⁿⁱ
company xⁿⁱ
company yⁿⁱ

dismantling_company_bni

Resource Relation ^C

Named Individuals composition ani

Process ^C

IRI http://w3id.org/CEON/ontology/processODP/Process

Named Individuals dismantling process 1ⁿⁱ

Statement ^c

Super Class Of <u>ElectronicsProductSourcingComponentRelation</u>^C

Named Individuals

composition_ani

q1ⁿⁱ

Object Properties

defined unit of system op

derived coherent unit of system op

exact match op

has dimension vector op

has unit^{op}

http://qudt.org/schema/qudt/hasUnit

compliance with op

has catalyst composition value op

onValue

Sub Property Of http://qudt.org/schema/qudt/quantity/value

Domain CatalystComposition^C

Range <u>CatalystCompositionValue</u>^C

has chemical element op

Range http://w3id.org/CEON/ontology/material/ChemicalElement

has chemical element composition value op

IRI http://w3id.org/CEON/demo/electronics/hasChemicalElementCo

mpositionValue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain ChemicalElementComposition^C

Range ChemicalElementCompositionValue^C

has conductivity op

IRI http://w3id.org/CEON/demo/electronics/hasConductivity

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

<u>Domain</u> <u>http://w3id.org/CEON/ontology/product/Item</u>

Range Conductivity^C

has conductivity value op

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

• Conductivity^C

 http://w3id.org/CEON/ontology/product/Product^c or http://w3id.org/CEON/ontology/product/Item^c

Range Conductivity Value C

has density at 25 op

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range DensityAt25^C

has density at25value op

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

DensityAt25^c

 http://w3id.org/CEON/ontology/product/Product or http://w3id.org/CEON/ontology/product/Item^C

Range <u>DensityAt25Value</u>^C

has depth ^{op}

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Range Depth^c

has depth value op

Sub Property Of http://w3id.org/CEON/ontology/quantity/hasDimension

Domain

Depth^c

http://w3id.org/CEON/ontology/product/Item or
 http://w3id.org/CEON/ontology/product/Product

Range <u>DepthValue</u>^C

has diameter op

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Super Property Of hasOuterDiameter op

Range <u>Diameter</u>^C

has diameter value op

IRI http://w3id.org/CEON/demo/electronics/hasDiameterValue

Sub Property Of http://w3id.org/CEON/ontology/quantity/hasDimension

Domain

Diameter^C

 http://w3id.org/CEON/ontology/product/Item^c or http://w3id.org/CEON/ontology/product/Product^c

Range <u>DiameterValue</u>^C

has fiber elongation at break op

IRI http://w3id.org/CEON/demo/electronics/hasFiberElongationAt

Break

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range FiberElongationAtBreak^C

has fiber elongation at break value op

BreakValue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

FiberElongationAtBreak^C

http://w3id.org/CEON/ontology/product/Item or
 http://w3id.org/CEON/ontology/product/Product

Range FiberElongationAtBreakValue^C

has fiber volume content op

t

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range FiberVolumeContent^C

has fiber volume content value op

IRI http://w3id.org/CEON/demo/electronics/hasFiberVolumeConten

tValue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

FiberVolumeContent^c

 http://w3id.org/CEON/ontology/product/Product^c or http://w3id.org/CEON/ontology/product/Item^c

Range <u>FiberVolumeContentValue</u>^C

has hazardous material op

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain http://w3id.org/CEON/ontology/product/Product or

http://w3id.org/CEON/ontology/product/Item^C

Range <u>HazardousMaterialPercentage</u>^C

has Ica value op

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Range LCAValue^c

has length op

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Range Length^c

has life span time op

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Range <u>LifeSpanTime</u>^C

has life span time value op

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

<u>LifeSpanTime</u>^C

http://w3id.org/CEON/ontology/product/Product or
 http://w3id.org/CEON/ontology/product/Item or

Range <u>LifeSpanTimeValue</u>^C

has maximum energy product op

IRI http://w3id.org/CEON/demo/electronics/hasMaximumEnergyProd

uct

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range <u>MaximumEnergyProduct</u>^C

has maximum energy product value op

uctValue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

<u>MaximumEnergyProduct</u>^c

http://w3id.org/CEON/ontology/product/Product or
 http://w3id.org/CEON/ontology/product/Item or

Range <u>MaximumEnergyProductValue</u>^C

has metal composition value op

alue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain <u>MetalComposition</u>^C

Range <u>MetalCompositionValue</u>^C

has operating voltage op

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range Operating Voltage^C

has operating voltage value op

IRI http://w3id.org/CEON/demo/electronics/has0peratingVoltageV

alue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

OperatingVoltage^C

http://w3id.org/CEON/ontology/product/Item or
 http://w3id.org/CEON/ontology/product/Product C

Range Operating Voltage Value C

has outer diameter op

Sub Property Of hasDiameter op

has post consumer recycled content value op

http://w3id.org/CEON/demo/electronics/hasPostConsumerRecyc

ledContentValue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

<u>PostConsumerRecycledContent</u>^C

Range PostConsumerRecycledContentValue^C

has pre consumer recycled content value op

edContentValue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain <u>PreConsumerRecycledContent</u>^C

Range PreConsumerRecycledContentValue^C

has rare earth composition value op

IRI http://w3id.org/CEON/demo/electronics/hasRareEarthComposit

ionValue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain RareEarthComposition^C

Range RareEarthCompositionValue^C

has rated load amps op

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range RatedLoadAmps^c

has rated load amps value op

е

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

RatedLoadAmps^C

 http://w3id.org/CEON/ontology/product/Product^c or http://w3id.org/CEON/ontology/product/Item^c

Range RatedLoadAmpsValue^C

has rated power output op

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range RatedPowerOutput^C

has rated power output value op

alue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

RatedPowerOutput^C

 http://w3id.org/CEON/ontology/product/Product^c or http://w3id.org/CEON/ontology/product/Item^c

Range RatedPowerOutputValue^C

has rated rpm op

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range RatedRPM^C

has rated rpm value op

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

RatedRPM^C

• http://w3id.org/CEON/ontology/product/Item

Range RatedRPMValue^C

has recycling pressure value op

Value

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Range RecyclingPressureValue^C

has recycling process duration op

uration

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Range RecyclingProcessDuration^C

has recycling process temperature op

IRI http://w3id.org/CEON/demo/electronics/hasRecyclingProcessT

emperature

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Range RecyclingTemperatureValue C

has refractive index at25 op

25

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Range RefractiveIndexAt25^C

has remanent magnetic flux density op

IRI http://w3id.org/CEON/demo/electronics/hasRemanentMagneticF

luxDensity

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range RemanentMagneticFluxDensity^C

has remanent magnetic flux density value op

luxDensityValue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

RemanentMagneticFluxDensity^C

http://w3id.org/CEON/ontology/product/Item

Range RemanentMagneticFluxDensityValue^C

has renewable content value op

IRI http://w3id.org/CEON/demo/electronics/hasRenewableContentV

alue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

RenewableContent^c

• http://w3id.org/CEON/ontology/product/Item

Range RenewableContentValue^C

has resistivity value op

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

Resistivity^C

http://w3id.org/CEON/ontology/product/Item

Range ResistivityValue^C

has shape op

IRI http://w3id.org/CEON/demo/electronics/hasShape

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Range Shape^C

has shear strength op

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range ShearStrength^c

has shear strength value op

е

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

ShearStrength^C

• http://w3id.org/CEON/ontology/product/Item

Range <u>ShearStrengthValue</u>^C

has stiffness op

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain <u>http://w3id.org/CEON/ontology/product/Item</u>

Range Stiffness^C

has stiffness value op

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

Stiffness^c

• http://w3id.org/CEON/ontology/product/Item

Range StiffnessValue^C

has tensile modulus op

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range <u>TensileModulus</u>^C

has tensile modulus value op

IRI http://w3id.org/CEON/demo/electronics/hasTensileModulusVal

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

TensileModulus^C http://w3id.org/CEON/ontology/product/Item

Range TensileModulusValue^C

has tensile strength op

IRI http://w3id.org/CEON/demo/electronics/hasTensileStrength

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

Domain http://w3id.org/CEON/ontology/product/Item

Range TensileStrength^C

has tensile strength value op

IRI http://w3id.org/CEON/demo/electronics/hasTensileStrengthVa

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

<u>TensileStrength</u>^C

http://w3id.org/CEON/ontology/product/Item

Range TensileStrengthValue^C

has transition temperature op

IRI http://w3id.org/CEON/demo/electronics/hasTransitionTempera

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

http://w3id.org/CEON/ontology/product/Item **Domain**

Range <u>TransitionTemperature</u>^C

has transition temperature value op

IRI http://w3id.org/CEON/demo/electronics/hasTransitionTempera

tureValue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

• <u>TransitionTemperature</u>^C

http://w3id.org/CEON/ontology/product/Item

Range <u>TransitionTemperatureValue</u>^C has unknown acute toxicity op

IRI http://w3id.org/CEON/demo/electronics/hasUnknownAcuteToxic

Sub Property Of http://qudt.org/schema/qudt/quantityValue

http://w3id.org/CEON/ontology/product/Item **Domain**

Range <u>UnknownAcuteToxicityPercentage^c</u>

has virgin fosil content value op

IRI http://w3id.org/CEON/demo/electronics/hasVirginFosilConten

tValue

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

VirginFosilContent^C
 http://w3id.org/CEON/ontology/product/Item

Range <u>VirginFosilContentValue^C</u>

has viscosity at 25 op

IRI http://w3id.org/CEON/demo/electronics/hasViscosityAt25

Sub Property Of http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty

http://w3id.org/CEON/ontology/product/Item **Domain**

Range ViscosityAt25^C

has viscosity at25value op

IRI http://w3id.org/CEON/demo/electronics/hasViscosityAt25Valu

Sub Property Of http://qudt.org/schema/qudt/quantityValue

Domain

ViscosityAt25^c

http://w3id.org/CEON/ontology/product/Item

Range ViscosityAt25Value^C

has width op

IRI http://w3id.org/CEON/demo/electronics/hasWidth

http://w3id.org/CEON/ontology/resourceODP/hasResourceProperty **Sub Property Of**

Range Width^C participant role op

participating actor op

participating resource op

IRI http://w3id.org/CEON/ontology/actorODP/participatingResour

ce

participation in op

http://w3id.org/CEON/ontology/actorODP/participationIn

Datatype Properties

conversion multiplier dp

http://qudt.org/schema/qudt/conversionMultiplier

iec61360code dp

numerical value dp

si units expression dp

IRI http://qudt.org/schema/qudt/siUnitsExpression

has astm compliance file url dp

eUrl

Sub Property Of hasFileUrl dp

has batch invoice number dp

IRI http://w3id.org/CEON/demo/electronics/hasBatchInvoiceNumbe

r

Range <u>xsd:string</u>

has batch number dp

Domain http://w3id.org/CEON/ontology/resourceODP/BatchOfObjects

Range <u>xsd:integer</u>

has black e coating brand name dp

IRI http://w3id.org/CEON/demo/electronics/hasBlackECoatingBran

dName

Range <u>xsd:string</u>

has black e coating technical datasheet dp

nicalDatasheet

Sub Property Of hasFileUrl dp

Range xsd:string

has casting certificate dp

IRI http://w3id.org/CEON/demo/electronics/hasCastingCertificat

e

Sub Property Of hasFileUrl dp

Range <u>xsd:string</u>

has decomissioning date ^{dp}

е

Range <u>xsd:dateTime</u>

has decommission reason dp

n

has efficiency class dp

has environmental product declaration dp

IRI http://w3id.org/CEON/demo/electronics/hasEnvironmentalProd

uctDeclaration

Sub Property Of hasFileUrl dp

Range <u>xsd:string</u>

has file url dp

Super Property Of

• hasASTMComplianceFileUrl^{dp}

hasBlackECoatingTechnicalDatasheet^{dp}

hasCastingCertificate^{dp}

• hasEnvironmentalProductDeclaration dp

• <u>hasFireWorkingConditionComplianceFileUrl</u>dp

<u>hasHysteresisCurveTechReport</u>^{dp}

• hasISOComplianceFileUrl^{dp}

hasLCAReport^{dp}

<u>hasMaterialDatasheet</u>^{dp}

<u>hasNormativeReferenceFileUrl</u>dp

hasPassivationProductTechnicalDatasheet^{dp}

• <u>hasREACHComplianceFileUrl dp</u>

hasResponsibleSourcingCertificate^{dp}

<u>hasRoHSComplianceFileUrl</u>^{dp}

hasSafetyDatasheet^{dp}

<u>hasSupplyDueDiligencePolicyReport</u>dp

hasSustainabilityDeclaration^{dp}

Range <u>xsd:string</u>

has fire working condition compliance file url dp

ionComplianceFileUrl

Sub Property Of hasFileUrl dp

Range <u>xsd:string</u>

has hysteresis curve tech report dp

chReport

Sub Property Of hasFileUrl dp

has iso compliance file url dp

IRI http://w3id.org/CEON/demo/electronics/hasISOComplianceFile

Url

Sub Property Of hasFileUrl dp

Range xsd:string

has installation date dp

Range <u>xsd:dateTime</u>

has installation instructions dp

http://w3id.org/CEON/demo/electronics/hasInstallationInstr

uctions

Range xsd:string

has intended application dp

http://w3id.org/CEON/demo/electronics/hasIntendedApplicati

on

Range xsd:string

has lca report^{dp}

Sub Property Of hasFileUrl dp

Range <u>xsd:string</u>

has lay up sequence dp

Range xsd:string

has magnet location dp

has maintenance instructions dp

IRI http://w3id.org/CEON/demo/electronics/hasMaintenanceInstru

ctions

Range xsd:string

has maintenance measures dp

es

Range <u>xsd:string</u>

has maintenance report dp

Range xsd:string

has maintenance trigger dp

r

Range xsd:string

has manufacturing sequence dp

ence

Range xsd:string

has material datasheet dp

IRI http://w3id.org/CEON/demo/electronics/hasMaterialDatasheet

Sub Property Of hasFileUrl dp

Range <u>xsd:string</u>

has normative reference file url dp

eFileUrl

Sub Property Of hasFileUrl dp

Range <u>xsd:string</u>

has part number code dp

Range <u>xsd:string</u>

has passivation product technical datasheet dp

IRI http://w3id.org/CEON/demo/electronics/hasPassivationProduc

tTechnicalDatasheet

Sub Property Of hasFileUrl dp

Range xsd:string

has production date dp

Domain http://w3id.org/CEON/ontology/resourceODP/BatchOfObjects

Range xsd:dateTime

has quality test link dp

http://w3id.org/CEON/demo/electronics/hasQualityTestLink

Range xsd:string

has reach compliance file url dp

IRI http://w3id.org/CEON/demo/electronics/hasREACHComplianceFi

leUrl

Sub Property Of hasFileUrl dp

Range <u>xsd:string</u>

has recycling process name dp

IRI http://w3id.org/CEON/demo/electronics/hasRecyclingProcessN

ame

Range <u>xsd:string</u>

has repair instructions dp

S

Range <u>xsd:anyURI</u>

has reported damage dp

Range <u>xsd:string</u>

has reported repairs dp

http://w3id.org/CEON/demo/electronics/hasReportedRepairs

Range <u>xsd:string</u>

has responsible sourcing certificate dp

ngCertificate

Sub Property Of hasFileUrl dp

Range <u>xsd:string</u>

has ro hs compliance file url dp

eUrl

Sub Property Of hasFileUrl dp

Range <u>xsd:string</u>

has safety datasheet dp

Sub Property Of hasFileUrl dp

Range xsd:string

has site name ^{dp}

Range xsd:string

has size level ^{dp}

Range xsd:double

has supply due diligence policy report dp

IRI http://w3id.org/CEON/demo/electronics/hasSupplyDueDiligenc

ePolicyReport

Sub Property Of hasFileUrl dp

Range xsd:string

has sustainability declaration dp

IRI http://w3id.org/CEON/demo/electronics/hasSustainabilityDec

laration

Sub Property Of hasFileUrl dp

Range xsd:string

has use and assembly instructions dp

tructions

Range <u>xsd:string</u>

hasdisassembly instructions dp

ctions

Range <u>xsd:string</u>

is adhesive contained ^{dp}

Range xsd:boolean

is bromide contained ^{dp}

Range xsd:boolean

is catalyst contained dp

Range xsd:boolean

is cores contained dp

is flame retardant dp

Range xsd:boolean

is high uv resistance dp

IRI http://w3id.org/CEON/demo/electronics/isHighUVResistance

Range xsd:boolean

is laminate contained dp

Range xsd:boolean

is matrix additive contained dp

http://w3id.org/CEON/demo/electronics/isMatrixAdditiveCont

ained

Range xsd:boolean

is metal contained ^{dp}

http://w3id.org/CEON/demo/electronics/isMetalContained

Range xsd:boolean

is nitrogen contained dp

Range <u>xsd:boolean</u>

is oxygen contained ^{dp}

Range xsd:boolean

is pre preg contained dp

Range xsd:boolean

is reac hcomplied dp

Range xsd:boolean

is rare earth contained dp

http://w3id.org/CEON/demo/electronics/isRareEarthContained

Range xsd:boolean

is ro hs complied ^{dp}

Range xsd:boolean

is surface finish contained ^{dp}

http://w3id.org/CEON/demo/electronics/isSurfaceFinishConta

ined

Range <u>xsd:boolean</u>

number of recycling cycles dp

les

participation time point dp

int

Annotation Properties

```
expression ap

IRI http://qudt.org/schema/qudt/expression

participating object ap

IRI http://w3id.org/CEON/ontology/actorODP/participatingObject

participating subject ap

IRI http://w3id.org/CEON/ontology/actorODP/participatingSubjec t

statement about ap

IRI http://w3id.org/CEON/ontology/statement/statementAbout
```

Namespaces

```
:
    http://w3id.org/CEON/demo/electronics/
dcterms
    http://purl.org/dc/terms/
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#
vann
    http://purl.org/vocab/vann/
xsd
    http://www.w3.org/2001/XMLSchema#
```

Legend

С	Classes
ор	Object Properties
dp	Datatype Properties
ap	Annotation Properties