Circular Economy Ontology Network (CEON) - Textile Module

Metadata

IRI

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

Title

Circular Economy Ontology Network (CEON) - Textile Module

Creator

Eva Blomqvist

Contributor

Huanyu Li

Mikael Lindecrantz

Robin Keskisärkkä

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Version Iri

http://w3id.org/CEON/demo/textile/0.1/

Version Info

0.1

Preferred Namespace Uri

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

Description

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

Classes

Regulation ^C	
IRI	http://w3id.org/CEON/ontology/textile/Regulation
Origin ^C	
IRI	http://w3id.org/CEON/ontology/textile/Origin
In Range Of	<u>hasOrigin^{op}</u>
Named Individuals	original ⁿⁱ recycled ⁿⁱ reused ⁿⁱ

Amount Interval Value C

Super Class Of

<u>LeakageAmountInterval</u>^c

PreConsumerRecycledContentInterval^C
RecyclingAtSameLevelAmountInterval^C

Amount Threshold C

In Range Of <u>disclosure Value op</u>

Named Individuals

0.01percⁿⁱ 0.1percⁿⁱ 1percⁿⁱ

Availability ^C

Named Individuals

<u>public</u>ni

secrecyAgreementⁿⁱ

Batch Of Textile Objects C

http://w3id.org/CEON/ontology/textile/BatchOfTextileObject

S

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

Restriction <u>hasColor op</u> some <u>BatchOfTextileObjects c</u>

Chemical Finishing ^C

Sub Class Of TextileFinishing^C

Named Individuals

anti-pilling ni

antiStaticFinishingⁿⁱ antibacterialFinishingⁿⁱ

coating ni coating Acrylic ni coating PU ni

coatingPVCⁿⁱ

creaseResistanceⁿⁱ
enzymeFinishingⁿⁱ
flameRetardantⁿⁱ
mattingAgentⁿⁱ
millWashingⁿⁱ
millingAgentⁿⁱ
naturalOilingⁿⁱ

opticalBrightenersⁿⁱ permanentPressⁿⁱ prepareForDyeingⁿⁱ resinsⁿⁱ

siliconesⁿⁱ
soilReleaseⁿⁱ
stainResistanceⁿⁱ

Color^C

In Range Of hasColor op

Dye ^c

Sub Class Of <u>TextileProperty</u>^c

Named Individuals

acidDyeⁿⁱ
analineDyeⁿⁱ
azoDyeⁿⁱ
basicDyeⁿⁱ
chromeDyeⁿⁱ
directDyeⁿⁱ
disperseDyeⁿⁱ

directDyeⁿⁱ
disperseDyeⁿⁱ
mordantDyeⁿⁱ
narturalDyeⁿⁱ

pigmentBiosyntheticⁿⁱ pigmentNaturalⁿⁱ pigmentSyntheticⁿⁱ reactiveDyeⁿⁱ vatDyeⁿⁱ

Dyeing Process^C

Sub Class Of TextileManufacturingProcess^C

In Range Of Dye Method op

Leakage Amount Interval ^c

IRI http://w3id.org/CEON/ontology/textile/LeakageAmountInterva

Sub Class Of AmountIntervalValue^C

Named Individuals

_10to25Percⁿⁱ _1to10Percⁿⁱ

_25to50Percⁿⁱ

_50-75Percⁿⁱ

_75to95Percⁿⁱ above95Percⁿⁱ

lessThan1Percⁿⁱ

Mechanical Finishing^C

Sub Class Of TextileFinishing^C

Named Individuals

<u>calendering</u>ⁿⁱ

embossing ni

<u>permanentCreasing</u>ⁿⁱ <u>pre-shrinking</u>ⁿⁱ

<u>pre-shrinking!</u> <u>steaming ni</u> <u>sueding ni</u>

Post Consumer Recycled Content Interval^C

IRI http://w3id.org/CEON/ontology/textile/PostConsumerRecycled

ContentInterval

Sub Class Of AmountIntervalValue^C

Named Individuals

<u>Opercⁿⁱ</u>

_0to10Percni

_10to25Percⁿⁱ

25to50Percⁿⁱ

50-75Percni

75to95Percⁿⁱ

above95Percⁿⁱ

Pre Consumer Recycled Content Interval ^c

ontentInterval

Sub Class Of AmountIntervalValue^C

Named Individuals

Opercni
Oto10Percni
10to25Percni
25to50Percni
50-75Percni
75to95Percni
above95Percni

Print^C

IRI http://w3id.org/CEON/ontology/textile/Print

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

Print Stuff^C

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

Named Individuals

acidDyeⁿⁱ
analineDyeⁿⁱ
azoDyeⁿⁱ
basicDyeⁿⁱ
chromeDyeⁿⁱ
directDyeⁿⁱ
disperseDyeⁿⁱ
mordantDyeⁿⁱ
narturalDyeⁿⁱ
pigmentBiosyntheticⁿⁱ
pigmentSyntheticⁿⁱ
reactiveDyeⁿⁱ

<u>sulfurDye</u>ⁿⁱ <u>vatDye</u>ⁿⁱ

Printing Process^C

Sub Class Of TextileManufacturingProcess^C

In Range Of Print Method op

Named Individuals

batikPrintedⁿⁱ
digitalPrintedⁿⁱ
handPaintedⁿⁱ
inkjetPrintedⁿⁱ
rollerPrintedⁿⁱ
screenPrintedⁿⁱ
transferPrintedⁿⁱ

Recycling At Same Level Amount Interval^C

AmountInterval

Sub Class Of AmountIntervalValue^C

Named Individuals

<u>Opercⁿⁱ</u>

<u>0to10Percⁿⁱ</u>

_10to25Percⁿⁱ

25to50Percⁿⁱ

50-75Percⁿⁱ

_75to95Percⁿⁱ

<u>95to99Percⁿⁱ</u>

above99Percⁿⁱ

Textile Chemical Substance Threshold Statement ^C

IRI http://w3id.org/CEON/ontology/textile/TextileChemicalSubst

anceThresholdStatement

Sub Class Of TextileDataSheetStatement^C

In Domain Of disclosure Value op

Textile Data Sheet^c

Sub Class Of http://w3id.org/CEON/ontology/datasheet/DataSheet

Restriction

hasProperty^{op} some <u>TextileDataSheet</u>^c

 $\underline{\text{http://w3id.org/CEON/ontology/resourceODP/isAbout}} \mathbf{\underline{\text{some}}} \ \underline{\text{TextileDataSheet}}^{c}$

Textile Data Sheet Issuing Statement^c

IRI http://w3id.org/CEON/ontology/textile/TextileDataSheetIssu

ingStatement

Sub Class Of TextileDataSheetStatement^C

Textile Data Sheet Statement ^c

ement

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

Super Class Of

<u>TextileChemicalSubstanceThresholdStatement</u>^C

TextileDataSheetIssuingStatement^C
TextileDataSheetUpdateStatement^C
TextileManufacturerStatement^C
TextileManufacturingSiteStatement^C
TextileProductCertification^C
TextileProductComponentRelation^C

<u>TextileProductCompositionDisclosureStatement</u>^c

<u>TextileProductCompositionOfConcern</u>^c <u>TextileProductCompositionWeightFraction</u>^c

<u>TextileProductDataSheet</u>^C

TextileProductDesignForDisassembly.

TextileProductDesignForRecycling.

TextileProductDesignForRefurbishment.

TextileProductDesignForRemanufacturing.

TextileProductDesignForReuseMethod.

TextileProductDesignedForBetterUse.

TextileProductManufacturingMethod.

TextileProductMatterCompositionRelation.

TextileProductRecycledContent.

<u>TextileProductRenewableContet</u>^c

Textile Data Sheet Update Statement ^c

teStatement

Sub Class Of TextileDataSheetStatement^C

Textile Finishing ^C

Sub Class Of TextileProperty^C

In Range Of hasFinishing op

Super Class Of

<u>ChemicalFinishing</u>^C <u>MechanicalFinishing</u>^C Textile Manufacturer Statement ^C

IRI http://w3id.org/CEON/ontology/textile/TextileManufacturerS

tatement

Sub Class Of TextileDataSheetStatement^C

Textile Manufacturing Process^c

Process

In Range Of hasTextileManufacturingProcess op

Super Class Of

<u>DyeingProcess^C</u> <u>PrintingProcess^C</u>

Named Individuals

directDyedⁿⁱ
dopeDyedⁿⁱ
pieceDyedⁿⁱ
topDyedⁿⁱ
undyedⁿⁱ
yarnDyedⁿⁱ

Textile Manufacturing Site Statement ^C

http://w3id.org/CEON/ontology/textile/TextileManufacturing

SiteStatement

Sub Class Of TextileDataSheetStatement^C

Textile Product^C

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

In Domain Of hasTextileProductType op

Restriction

<u>hasColor</u>^{op} some <u>TextileProduct</u>^c

hasTextileProductType^{op} some TextileProduct^c

Textile Product Certification ^C

ication

Sub Class Of TextileDataSheetStatement^C

Textile Product Component Relation ^c

IRI http://w3id.org/CEON/ontology/textile/TextileProductCompon

entRelation

Sub Class Of

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

<u>TextileDataSheetStatement</u>^c

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

http://qudt.org/schema/qudt/numericalValue_some n89525ab96d844c0da1b4f79bda01b0afb15^c and

http://w3id.org/CEON/ontology/actorODP/participatingObject_some http://w3id.org/CEON/ontology/resourceODP/Constituent^C and http://w3id.org/CEON/ontology/actorODP/participatingSubject_some TextileProduct^C and http://qudt.org/schema/qudt/hasUnit_some

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

Textile Product Composition Disclosure Statement^C

itionDisclosureStatement

Sub Class Of TextileDataSheetStatement^C

In Range Of chemicalSubstanceDisclosureThreshold op

Textile Product Composition Of Concern^c

IRI http://w3id.org/CEON/ontology/textile/TextileProductCompos

itionOfConcern

Sub Class Of TextileDataSheetStatement^C

Textile Product Composition Weight Fraction ^c

IRI http://w3id.org/CEON/ontology/textile/TextileProductCompos

itionWeightFraction

Sub Class Of TextileDataSheetStatement^C

Textile Product Data Sheet^c

eet

Sub Class Of TextileDataSheetStatement^C

Textile Product Design For Disassembly c

IRI http://w3id.org/CEON/ontology/textile/TextileProductDesign

ForDisassembly

Sub Class Of TextileDataSheetStatement^C

Super Class Of

<u>TextileProductDesignToBeCleanlyRemoved</u>^c
<u>TextileProductDesignToBeDismantled</u>^c

Textile Product Design For Recycling C

IRI http://w3id.org/CEON/ontology/textile/TextileProductDesign

ForRecycling

Sub Class Of TextileDataSheetStatement^C

In Range Of desinged for recycling at the same level of quality op

Restriction recyclingAtSameQualityRange^{op} some TextileProductDesignForRecycling^c

Textile Product Design For Refurbishment^c

ForRefurbishment

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

Textile Product Design For Remanufacturing ^c

For Remanufacturing

Sub Class Of TextileDataSheetStatement^C

Textile Product Design For Reuse Method C

For Reuse Method

Sub Class Of TextileDataSheetStatement^C

Textile Product Design To Be Cleanly Removed C

IRI http://w3id.org/CEON/ontology/textile/TextileProductDesign

ToBeCleanlyRemoved

Sub Class Of TextileProductDesignForDisassembly^C

Textile Product Design To Be Dismantled C

IRI http://w3id.org/CEON/ontology/textile/TextileProductDesign

ToBeDismantled

Sub Class Of TextileProductDesignForDisassembly^C

Textile Product Designed For Better Use c

IRI http://w3id.org/CEON/ontology/textile/TextileProductDesign

edForBetterUse

Sub Class Of TextileDataSheetStatement^C

Textile Product Manufacturing Method^C

cturingMethod

Sub Class Of TextileDataSheetStatement^C

Textile Product Matter Composition Relation ^C

IRI http://w3id.org/CEON/ontology/textile/TextileProductMatter

CompositionRelation

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

<u>TextileDataSheetStatement</u>^C

http://w3id.org/CEON/ontology/actorODP/ResourceParticipation http://w3id.org/CEON/ontology/actorODP/participatingSubject_some

n89525ab96d844c0da1b4f79bda01b0afb26^c and

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

http://w3id.org/CEON/ontology/resourceODP/Matter^C

Textile Product Object^C

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

Restriction <u>hasColor^{op} some TextileProductObject^c</u>

Textile Product Recycled Content^C

IRI http://w3id.org/CEON/ontology/textile/TextileProductRecycl

edContent

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

<u>TextileDataSheetStatement</u>^c

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

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

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

n89525ab96d844c0da1b4f79bda01b0afb39^c and

http://w3id.org/CEON/ontology/provenance/statementAbout_some

n89525ab96d844c0da1b4f79bda01b0afb35^c

Textile Product Renewable Contet^c

bleContet

Sub Class Of TextileDataSheetStatement^C

Textile Product Type C

In Range Of hasTextileProductType op

Textile Property^C

http://w3id.org/CEON/ontology/textile/TextileProperty

Super Class Of

<u>Dye</u>^c

TextileFinishing^C
WaterProperty^C

Textile Recycling Process ^C

IRI http://w3id.org/CEON/ontology/textile/TextileRecyclingProc

ess

In Range Of textileProductDesignForRecycling op

Named Individuals

biodigestionⁿⁱ

biosphereCascadingⁿⁱ homeCompostingⁿⁱ incinerationⁿⁱ

<u>industrialComposting</u>ⁿⁱ

Validation ^c

IRI http://w3id.org/CEON/ontology/textile/Validation

Named Individuals

certified ni

<u>validatedByThirdParty</u>ⁿⁱ

Water Property ^c

Sub Class Of TextileProperty^C

In Range Of Water Property op

Named Individuals

Water repellentⁿⁱ
Water resistantⁿⁱ
Waterproofⁿⁱ

Brand Of Resource C

Sub Class Of http://w3id.org/CEON/ontology/actorODP/ResourceRelation

Equivalentclass http://w3id.org/CEON/ontology/actorODP/participantRole_value_brand and

http://w3id.org/CEON/ontology/actorODP/ResourceRelation^c

Reach Compliance^C

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

Equivalentclass http://w3id.org/CEON/ontology/product/complianceWith-value REACH^C

Object Properties

anticipated leakage during use op

IRI http://w3id.org/CEON/ontology/textile/anticipatedLeakageDu

ringUse

Description

Percentage of the product content anticipated to become leakage during the

use phase due to for example wear & tear, oxidation, erosion, etc.

Sub Property Of hasProperty op

chemical substance disclosure threshold op

closureThreshold

Range <u>TextileProductCompositionDisclosureStatement</u>^C

desinged for recycling at the same level of quality op

IRI http://w3id.org/CEON/ontology/textile/designedForRecycling

AtSameQuality

DescriptionPercentage of the product that is designed for recycling at the same level of

quality. The remainder of the materials is foreseen by the manufacturer to be

recycled at a lower quality than the original content.

Sub Property Of hasProperty op

Range <u>TextileProductDesignForRecycling</u>^C

disclosure value op

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

<u>Domain</u> <u>TextileChemicalSubstanceThresholdStatement</u>^C

Range <u>AmountThreshold</u>^C

has color op

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

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

Range Color^C

Dye Method op

Sub Property Of hasTextileManufacturingProcess op

Range <u>DyeingProcess</u>^c

Dye Stuff^{op}

Sub Property Of hasProperty op

has finishing op

Sub Property Of hasProperty op

Range <u>TextileFinishing</u>^C

Finishing Step op

Sub Property Of hasTextileManufacturingProcess op

has post consumer recycled content amount op

IRI http://w3id.org/CEON/ontology/textile/hasPostConsumerRecyc

ledContentAmount

Sub Property Of http://w3id.org/CEON/ontology/product/hasComposition

has pre consumer recycled content amount op

IRI http://w3id.org/CEON/ontology/textile/hasPreConsumerRecycl

edContentAmount

Sub Property Of http://w3id.org/CEON/ontology/product/hasComposition

Print Finishing op

http://w3id.org/CEON/ontology/textile/hasPrintFinishing

Sub Property Of hasProperty op

Print Method op

Sub Property Of hasTextileManufacturingProcess^{op}

Range PrintingProcess^C

Print Stuff^{op}

Sub Property Of hasProperty op

has property op

IRI http://w3id.org/CEON/ontology/textile/hasProperty

Super Property Of

• anticipatedLeakageDuringUse^{op}

desinged for recycling at the same level of quality op

• Dye Stuff^{op}

• <u>hasFinishing</u>op

• Print Finishing op

Print Stuff^{op}

• Water Property op

Domain http://w3id.org/CEON/ontology/datasheet/DataSheet

Range http://w3id.org/CEON/ontology/provenance/Statement

has textile manufacturing process op

ingProcess

Super Property Of

Dye Method op

Finishing Step^{op}

Print Method op

Range <u>TextileManufacturingProcess</u>^C

has textile product type op

http://w3id.org/CEON/ontology/textile/hasTextileProductTyp

е

Domain <u>TextileProduct</u>^c

Range <u>TextileProductType</u>^c

Water Property op

Sub Property Of hasProperty op

Range WaterProperty^C

product composition disclosure availability op

sclosureAvailability

product composition disclosure validation op

sclosureValidation

recycling at same quality range op

IRI http://w3id.org/CEON/ontology/textile/recyclingAtSameQuali

tyRange

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

textile product design op

http://w3id.org/CEON/ontology/textile/textileProductDesign

Super Property Of <u>textileProductDesignForRecycling</u> op

textile product design for recycling op

IRI http://w3id.org/CEON/ontology/textile/textileProductDesign

ForRecycling

Description Product designed for a certain recycling method.

Sub Property Of textileProductDesignop

Range <u>TextileRecyclingProcess</u>^C

weight fraction of disclosed substances op

losedSubstances

has origin ^{op}

Range Origin^c

Datatype Properties

has type ^{dp}

Description Description of the kind of product.

Range xsd:string

contains metal dp

DescriptionThe product contains metal.

Range xsd:boolean

includes trims dp

Description The product includes trims.

Range <u>xsd:boolean</u>

production site dp

http://w3id.org/CEON/ontology/textile/productionSite

Description The location where the product was produced.

Range <u>xsd:string</u>

C Emark dp

Description The product has theCE mark.

Sub Property Of certification dp

Range xsd:boolean

available information dp

http://w3id.org/CEON/ontology/textile/availableInformation

Super Property Of

• <u>biodegradabilityTestAvailable</u> dp

• materialSafetyDataSheetAvailable^{dp}

materialSafetyDataSheetForDyeingAvailable^{dp}

materialSafetyDataSheetForFinishingAvailable^{dp}

• <u>technicalDataSheetAvailable</u> dp

biodegradability test available dp

Available

DescriptionBiodegradability test is available.

Sub Property Of available Information dp

Range xsd:boolean

certification dp

Super Property Of CEmark dp

chemical compliance dp

collection parameter dp

http://w3id.org/CEON/ontology/textile/collectionParameter

Super Property Of collectionSystem dp

collection system dp

DescriptionThe manufacturer/ industry association has a dedicated collection system in

place to gather and deliver products for recycling.

Sub Property Of collectionParameter dp

Range xsd:boolean

design for properties dp

IRI http://w3id.org/CEON/ontology/textile/designForProperties

Super Property Of

• <u>designedForRecycling</u>^{dp}

• <u>designedForRefurbishment</u>^{dp}

• <u>designedForRemanufacturing</u> dp

• <u>designedForReuse</u>^{dp}

design for recycling amounts dp

IRI http://w3id.org/CEON/ontology/textile/designForRecyclingAm

ounts

Super Property Of emissionByDesign^{dp}

designed for recycling dp

DescriptionThe product is designed for recycling?e

Sub Property Of designForProperties dp

designed for refurbishment dp

IRI http://w3id.org/CEON/ontology/textile/designedForRefurbish

ment

DescriptionThe product is desinged for refurbishment?

Sub Property Of designForProperties dp

designed for remanufacturing dp

IRI http://w3id.org/CEON/ontology/textile/designedForRemanufac

turing

DescriptionThe product is designed for remanufacturing?

Sub Property Of designForProperties dp

designed for reuse dp

Sub Property Of designForProperties dp

Super Property Of <u>designedForReuseWMinimalMod</u>^{dp}

designed for reuse w minimal mod dp

IRI http://w3id.org/CEON/ontology/textile/designedForReuseWMin

imalMod

DescriptionThe product is designed for re-use as-is or with minimal modification.

Sub Property Of designedForReuse dp

emission by design dp

DescriptionThe portion of the product known to be emitted into the environment during use

is designed for that purpose.

Sub Property Of designForRecyclingAmounts dp

finishing steps dp

material safety data sheet available dp

eetAvailable

DescriptionMaterial Safety Data Sheet for the product is available.

Sub Property Of availableInformation dp

Range xsd:boolean

material safety data sheet for dyeing available dp

eetForDyeingAvailable

DescriptionMaterial Safety Data Sheets for Dyeing are available.

Sub Property Of availableInformation dp

Range xsd:boolean

material safety data sheet for finishing available dp

eetForFinishingAvailable

DescriptionMaterial Safety Data Sheets for Finishing are available.

Sub Property Of availableInformation dp

Range xsd:boolean

technical data sheet available dp

ailable

Description The Technical Data Sheet is available.

Sub Property Of available Information dp

Range <u>xsd:boolean</u>

Annotation Properties

C Fmapping ap

Pcd Smapping ap

Namespaces

http://w3id.org/CEON/ontology/textile/

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

c Classes

op Object
Properties

dp Datatype
Properties

ap Annotation
Properties