# Flat Glass Ontology

### Metadata

IRI

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

Title

Flat Glass Ontology

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**Date Created** 

2024-07-09

License

https://github.com/LiUSemWeb/DPP/blob/master/LICENSE

**Version Iri** 

http://w3id.org/CEON/ontology/flatglass/0.3/

**Version Info** 

0.3

**Preferred Namespace Prefix** 

window

**Preferred Namespace Uri** 

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

**Description** 

This is the Flat Glass Ontology

### Classes

## Building Element Type<sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/BuildingElementType

In Range Of hasType op

**Super Class Of** 

WindowGlassType <sup>c</sup>

WindowType<sup>c</sup>

Built Element<sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/BuiltElement

In Domain Of

 $\underline{\text{dismountingParameter}^{op}}$ 

has component<sup>op</sup>

<u>hasMaterialComposition</u><sup>op</sup>

hasStructure<sup>op</sup> hasType<sup>op</sup> door<sup>dp</sup>

window door dp

In Range Of has component op

**Super Class Of** 

Window<sup>c</sup>

WindowFrame<sup>c</sup>
WindowGlass<sup>c</sup>

Condition <sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/Condition

Sub Class Of StructuralParameter<sup>C</sup>

**Equivalentclass** 

In Range Of has frame condition op

**Named Individuals** 

<u>fair<sup>ni</sup></u> good<sup>ni</sup>

poor condition ni

Dismounting Direction <sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/DismountingDirection

Sub Class Of DismountingParameter<sup>C</sup>

In Range Of mounted from inside/outside op

**Named Individuals** 

<u>from inside</u><sup>ni</sup> <u>from outside</u><sup>ni</sup>

# Dismounting Parameter <sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/DismountingParameter

In Range Of <u>dismountingParameter^op</u>

Super Class Of <u>DismountingDirection</u><sup>C</sup>

## Ligth Transmission Level<sup>c</sup>

IRI http://w3id.org/CEON/ontology/flatglass/LigthTransmissionLevel

Sub Class Of StructuralParameter<sup>C</sup>

**Equivalentclass** 

In Range Of LT above 63% op

**Named Individuals** 

Above63Perc<sup>ni</sup> Below63Perc<sup>ni</sup>

### Material <sup>c</sup>

IRI http://w3id.org/CEON/ontology/flatglass/Material

In Range Of

has frame material op

<u>hasMaterialComposition</u>op

**Named Individuals** 

Aluminium<sup>ni</sup>
PVC<sup>ni</sup>
Steel<sup>ni</sup>
Wood<sup>ni</sup>

## Sound Reduction Level<sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/SoundReductionLevel

Sub Class Of StructuralParameter<sup>C</sup>

**Equivalentclass** 

In Range Of Sound reduction 40/37/35/30 op

**Named Individuals** 

level30<sup>ni</sup> level35<sup>ni</sup> level37<sup>ni</sup> level40<sup>ni</sup>

#### Structural Parameter<sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/StructuralParameter

In Range Of hasStructure op

**Super Class Of** 

Condition<sup>C</sup>

<u>LigthTransmissionLevel</u><sup>c</sup> <u>SoundReductionLevel</u><sup>c</sup>

<u>U-value</u><sup>c</sup>

WindowCompositionType <sup>c</sup>

## U-Value <sup>c</sup>

IRI http://w3id.org/CEON/ontology/flatglass/U-value

Sub Class Of StructuralParameter<sup>C</sup>

**Equivalentclass** 

In Range Of <u>u-value 2,7/1,8/1,1/0,7</u> op

**Named Individuals** 

0.7<sup>ni</sup>
1.1<sup>ni</sup>
1.8<sup>ni</sup>
2.7<sup>ni</sup>

#### Window<sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/Window

#### **Sub Class Of**

BuiltElement<sup>c</sup>

manufacturing month year (mmYY)<sup>dp</sup> max 1 xsd:gMonthYear<sup>c</sup> and door<sup>dp</sup> exactly 1 xsd:boolean<sup>c</sup> and solar control glass<sup>dp</sup> exactly 1 xsd:boolean<sup>c</sup> and has frame material<sup>op</sup> min 1 Material<sup>c</sup> and total glass thickness <sup>dp</sup> max 1 xsd:string<sup>c</sup> and body tinted glass dp exactly 1 xsd:boolean and u-value 2,7/1,8/1,1/0,7 op max 1 U-value and wired glass dp exactly 1 xsd:boolean and LT above 63% pmax 1 <u>LigthTransmissionLevel<sup>c</sup></u> and fire glass<sup>dp</sup> exactly 1 xsd:boolean<sup>c</sup> and Asbestos Y/N<sup>dp</sup> exactly 1 xsd:boolean<sup>c</sup> and laminated glass<sup>dp</sup> exactly 1 xsd:boolean<sup>c</sup> and Sound reduction 40/37/35/30 op max 1 SoundReductionLevel and size dp max 1 xsd:string<sup>c</sup> and window type<sup>op</sup> exactly 1 WindowCompositionType<sup>c</sup> and enamelled glass dp exactly 1 xsd:boolean and tempered glass dp exactly 1 xsd:boolean and has frame condition op max 1 Condition and connected max 1 xsd:boolean and has component op some WindowFrame and Georgian bar in singl fram/IGU? dp exactly 1 xsd:boolean<sup>c</sup> and PCB Y/N<sup>dp</sup> exactly 1 xsd:boolean<sup>c</sup> and mounted from inside/outside<sup>op</sup> max 1 DismountingDirection<sup>c</sup> and patterned glass dp exactly 1 xsd:boolean<sup>c</sup> and has component<sup>op</sup> some WindowGlass<sup>c</sup> and stamp on glass<sup>dp</sup> max 1 xsd:boolean<sup>c</sup> and film on glass<sup>dp</sup> exactly 1 xsd:boolean<sup>c</sup> and window door<sup>dp</sup> exactly 1 xsd:boolean and integrated blind p exactly 1 xsd:boolean

#### In Domain Of

replacement frame or glass op mounted from inside/outside op

connected dp
PCB Y/N dp
openable dp

#### Window Composition Type <sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/WindowCompositionType

Sub Class Of StructuralParameter C

In Range Of window type<sup>op</sup>

**Named Individuals** 

IGU only<sup>ni</sup>

single glass only<sup>ni</sup> connected 1+1<sup>ni</sup> connected 2+1<sup>ni</sup>

#### Window Frame <sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/WindowFrame

Sub Class Of BuiltElement<sup>C</sup>

Window Glass<sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/WindowGlass

Sub Class Of BuiltElement<sup>C</sup>

Window Glass Type C

IRI http://w3id.org/CEON/ontology/flatglass/WindowGlassType

Sub Class Of BuildingElementType<sup>C</sup>

Window Type <sup>C</sup>

IRI http://w3id.org/CEON/ontology/flatglass/WindowType

Sub Class Of BuildingElementType<sup>c</sup>

# **Object Properties**

dismounting parameter op

IRI http://w3id.org/CEON/ontology/flatglass/dismountingParameter

Super Property Of mounted from inside/outside op

Domain BuiltElement<sup>c</sup>

Range <u>DismountingParameter</u><sup>C</sup>

has component op

IRI http://w3id.org/CEON/ontology/flatglass/hasComponent

Domain BuiltElement<sup>c</sup>

Range BuiltElement<sup>C</sup>

has frame condition op

IRI http://w3id.org/CEON/ontology/flatglass/hasFrameCondition

Sub Property Of reuseParameter op

Domain Window<sup>c</sup> or WindowFrame<sup>c</sup>

Range Condition<sup>c</sup>

has frame material op

IRI http://w3id.org/CEON/ontology/flatglass/hasFrameMaterial

Sub Property Of hasMaterialComposition op

**Domain** WindowFrame or Window or Window

Range Material<sup>C</sup>

LT above 63% op

IRI http://w3id.org/CEON/ontology/flatglass/hasLightTransmission

Sub Property Of hasStructure op

Domain WindowGlass<sup>c</sup> or Window<sup>c</sup>

Range <u>LigthTransmissionLevel</u><sup>C</sup>

has material composition op

IRI http://w3id.org/CEON/ontology/flatglass/hasMaterialComposition

Sub Property Of recyclingParameter op

Super Property Of has frame material op

Domain BuiltElement<sup>c</sup>

Range Material<sup>c</sup>

Sound reduction 40/37/35/30 op

IRI http://w3id.org/CEON/ontology/flatglass/hasSoundReduction

Sub Property Of hasStructure op

Domain WindowGlass<sup>c</sup> or Window<sup>c</sup>

Range SoundReductionLevel<sup>C</sup>

has structure op

IRI http://w3id.org/CEON/ontology/flatglass/hasStructure

Sub Property Of reuseParameter op

**Super Property Of** 

• LT above 63% op

Sound reduction 40/37/35/30<sup>op</sup>
 u-value 2,7/1,8/1,1/0,7<sup>op</sup>

window type<sup>op</sup>

Domain BuiltElement<sup>c</sup>

Range <u>StructuralParameter</u><sup>C</sup>

has type op

IRI http://w3id.org/CEON/ontology/flatglass/hasType

Domain BuiltElement<sup>c</sup>

Range BuildingElementType<sup>c</sup>

u-value 2,7/1,8/1,1/0,7 op

IRI http://w3id.org/CEON/ontology/flatglass/hasUValue

Sub Property Of hasStructure op

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range <u>U-value</u><sup>c</sup>

window type op

IRI http://w3id.org/CEON/ontology/flatglass/hasWindowComposition

Sub Property Of hasStructure op

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range WindowCompositionType<sup>C</sup>

recycling parameter op

IRI http://w3id.org/CEON/ontology/flatglass/recyclingParameter

Super Property Of hasMaterialComposition op

replacement frame or glass op

IRI http://w3id.org/CEON/ontology/flatglass/replacementRecommendation

Sub Property Of reuseParameter op

Domain Window<sup>c</sup>

Range <u>WindowGlass<sup>c</sup> or WindowFrame<sup>c</sup></u>

reuse parameter op

IRI http://w3id.org/CEON/ontology/flatglass/reuseParameter

**Super Property Of** 

• has frame condition op

• hasStructure<sup>op</sup>

• replacement frame or glass op

mounted from inside/outside op

IRI http://w3id.org/CEON/ontology/flatglass/windowDismounting

Sub Property Of dismountingParameter op

**Domain** Window<sup>c</sup>

Range <u>DismountingDirection</u><sup>C</sup>

# **Datatype Properties**

body tinted glass  $^{\mbox{dp}}$ 

IRI http://w3id.org/CEON/ontology/flatglass/bodyTintedGlass

Sub Property Of recycleParameterValue dp

Domain WindowGlass<sup>c</sup> or Window<sup>c</sup>

Range <u>xsd:boolean</u>

 $connected^{\,dp}$ 

IRI http://w3id.org/CEON/ontology/flatglass/connected

**Description**A window composed of two connected glass panes.

Sub Property Of <u>structuralValue dp</u>

**Domain** Window<sup>c</sup>

Range <u>xsd:boolean</u>

Asbestos Y/N<sup>dp</sup>

IRI http://w3id.org/CEON/ontology/flatglass/containsAsbestos

Sub Property Of recycleParameterValue dp

Domain Window<sup>c</sup> or WindowFrame<sup>c</sup>

Range <u>xsd:boolean</u>

PCB Y/N<sup>dp</sup>

IRI http://w3id.org/CEON/ontology/flatglass/containsPCB

Sub Property Of recycleParameterValue dp

Domain Window<sup>c</sup>

Range <u>xsd:boolean</u>

door dp

IRI http://w3id.org/CEON/ontology/flatglass/door

Sub Property Of <u>structuralValue dp</u>

Domain BuiltElement<sup>c</sup>

Range <u>xsd:boolean</u>

enamelled glass <sup>dp</sup>

IRI http://w3id.org/CEON/ontology/flatglass/enamelledGlass

Sub Property Of recycleParameterValue dp

Domain WindowGlass<sup>c</sup> or Window<sup>c</sup>

Range <u>xsd:boolean</u>

film on glass dp

IRI http://w3id.org/CEON/ontology/flatglass/filmOnGlass

Sub Property Of recycleParameterValue dp

Super Property Of film thicker than 0.25mm dp

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range xsd:boolean

film thicker than 0.25mm<sup>dp</sup>

IRI http://w3id.org/CEON/ontology/flatglass/filmThickerThan0point25

Sub Property Of film on glass dp

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range <u>xsd:boolean</u>

fire glass dp

IRI http://w3id.org/CEON/ontology/flatglass/fireGlass

Sub Property Of recycleParameterValue dp

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range <u>xsd:boolean</u>

fire glass with gel dp

IRI http://w3id.org/CEON/ontology/flatglass/fireGlassWGel

Sub Property Of recycleParameterValue dp

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range <u>xsd:boolean</u>

fire glass without  $gel^{dp}$ 

IRI http://w3id.org/CEON/ontology/flatglass/fireGlassWoGel

Sub Property Of recycleParameterValue dp

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range <u>xsd:boolean</u>

Georgian bar in singl fram/IGU?<sup>dp</sup>

IRI http://w3id.org/CEON/ontology/flatglass/georgianBar

Sub Property Of recycleParameterValue dp

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range xsd:boolean

integrated blind dp

IRI http://w3id.org/CEON/ontology/flatglass/hasIntegratedBlind

Sub Property Of reuseParameterValue dp

Domain Window<sup>c</sup> or WindowFrame <sup>c</sup> or WindowGlass <sup>c</sup>

Range <u>xsd:boolean</u>

laminated glass dp

IRI http://w3id.org/CEON/ontology/flatglass/laminatedGlass

Sub Property Of recycleParameterValue dp

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range <u>xsd:boolean</u>

manufacturing month year (mmYY) dp

IRI http://w3id.org/CEON/ontology/flatglass/manufacturingMonthYear

Sub Property Of recycleParameterValue dp

Domain WindowGlass<sup>c</sup> or WindowFrame<sup>c</sup> or Window<sup>c</sup>

Range <u>xsd:gMonthYear</u>

openable <sup>dp</sup>

IRI http://w3id.org/CEON/ontology/flatglass/openable

Sub Property Of <u>structuralValue dp</u>

Domain Window<sup>c</sup>

Range xsd:boolean

patterned glass dp

IRI http://w3id.org/CEON/ontology/flatglass/patternedGlass

Sub Property Of recycleParameterValue dp

Domain WindowGlass<sup>c</sup> or Window<sup>c</sup>

Range <u>xsd:boolean</u>

recycle parameter value dp

IRI http://w3id.org/CEON/ontology/flatglass/recycleParameterValue

**Super Property Of** 

- body tinted glass<sup>dp</sup>
- Asbestos Y/N<sup>dp</sup>
- PCB Y/N<sup>dp</sup>
- enamelled glass<sup>dp</sup>
- film on glass<sup>dp</sup>
- fire glass<sup>dp</sup>
- fire glass with gel<sup>dp</sup>
- fire glass without gel<sup>dp</sup>
- Georgian bar in singl fram/IGU?<sup>dp</sup>
- <u>laminated glass <sup>dp</sup></u>
- manufacturing month year (mmYY)<sup>dp</sup>
- patterned glass dp
- sizedp
- stamp on glass dp
- tempered glass dp
- total glass thickness dp
- wired glass<sup>dp</sup>

reuse parameter value dp

IRI http://w3id.org/CEON/ontology/flatglass/reuseParameterValue

**Super Property Of** 

- integrated blind dp
- solar control glass<sup>dp</sup>

size dp

IRI http://w3id.org/CEON/ontology/flatglass/size

**Sub Property Of** recycleParameterValue dp

Domain WindowGlass<sup>c</sup> or WindowFrame<sup>c</sup> or Window<sup>c</sup>

solar control glass dp

IRI http://w3id.org/CEON/ontology/flatglass/solarControlGlass

Sub Property Of reuseParameterValue dp

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range <u>xsd:boolean</u>

stamp on glass dp

IRI http://w3id.org/CEON/ontology/flatglass/stampOnGlass

Sub Property Of recycleParameterValue dp

Domain WindowGlass<sup>c</sup> or Window<sup>c</sup>

Range <u>xsd:boolean</u>

structural value dp

IRI http://w3id.org/CEON/ontology/flatglass/structuralValue

**Super Property Of** 

connected<sup>dp</sup>

door<sup>dp</sup>

• <u>openable</u><sup>dp</sup>

• window door dp

tempered glass dp

IRI http://w3id.org/CEON/ontology/flatglass/temperedGlass

Sub Property Of recycleParameterValue dp

Domain WindowGlass<sup>c</sup> or Window<sup>c</sup>

Range xsd:boolean

total glass thickness dp

IRI http://w3id.org/CEON/ontology/flatglass/totalGlassThickness

Sub Property Of recycleParameterValue dp

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range xsd:float

window door dp

IRI http://w3id.org/CEON/ontology/flatglass/windowDoor

Sub Property Of <u>structuralValue dp</u>

Domain BuiltElement<sup>c</sup>

Range <u>xsd:boolean</u>

wired glass dp

IRI http://w3id.org/CEON/ontology/flatglass/wiredGlass

Sub Property Of recycleParameterValue dp

Domain Window<sup>c</sup> or WindowGlass<sup>c</sup>

Range xsd:boolean

# **Annotation Properties**

contributor ap

IRI http://purl.org/dc/terms/contributor

created ap

IRI http://purl.org/dc/terms/created

creator ap

IRI http://purl.org/dc/terms/creator

description ap	
IRI	http://purl.org/dc/terms/description
license ap	
IRI	http://purl.org/dc/terms/license
title <sup>ap</sup>	
IRI	http://purl.org/dc/terms/title
preferred namespace prefix <sup>ap</sup>	
IRI	http://purl.org/vocab/vann/preferredNamespacePrefix
preferred namespace uri <sup>ap</sup>	
IRI	http://purl.org/vocab/vann/preferredNamespaceUri

# Namespaces

```
:
    http://w3id.org/CEON/ontology/flatglass/
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

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Classes

**Object Properties** 

**Datatype Properties** 

**Annotation Properties**