DRAFT - Information Delivery Specification v0.2

More information on https://github.com/buildingSMART/IDS/tree/master/Development

schema location: ids.xsd attributeFormDefault: unqualified qualified elementFormDefault:

targetNamespace: http://standards.buildingsmart.org/IDS

Elements Complex types <u>applicabilityType</u> <u>ids</u>

classificationType

<u>entityType</u>

idsType materialType

propertyType

<u>requirementsType</u>

<u>specificationType</u>

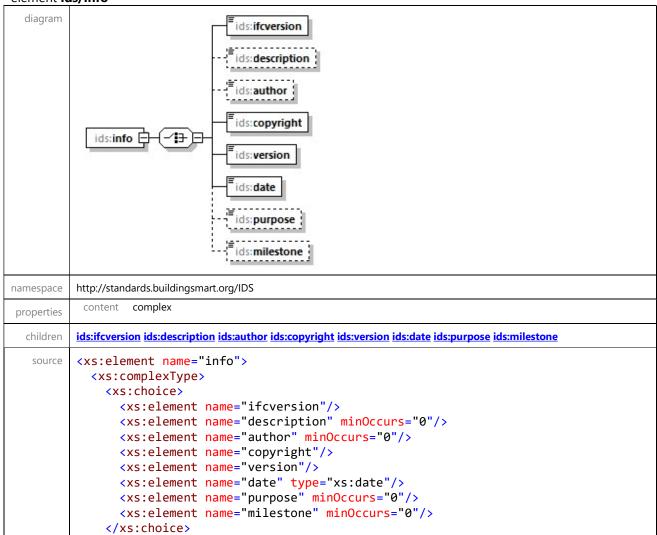
systemType

element ids

```
diagram
                         ids:idsType (extension)
              ids
                                        ids:specification
                                        ids:info 🕀
           http://standards.buildingsmart.org/IDS
namespace
     type
           extension of ids:idsType
            content
                     complex
properties
           ids:specification ids:info
  children
           <xs:element name="ids">
   source
             <xs:complexType>
                <xs:complexContent>
                  <xs:extension base="ids:idsType">
                     <xs:sequence>
                       <xs:element name="info">
                          <xs:complexType>
                             <xs:choice>
```

```
<xs:element name="ifcversion"/>
                <xs:element name="description" minOccurs="0"/>
                <xs:element name="author" minOccurs="0"/>
                <xs:element name="copyright"/>
                <xs:element name="version"/>
                <xs:element name="date" type="xs:date"/>
                <xs:element name="purpose" minOccurs="0"/>
                <xs:element name="milestone" minOccurs="0"/>
              </xs:choice>
            </xs:complexType>
          </xs:element>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
</xs:element>
```

element ids/info



```
</xs:complexType>
</xs:element>
```

element ids/info/ifcversion

diagram	ids:ifcversion
namespace	http://standards.buildingsmart.org/IDS
source	<pre><xs:element name="ifcversion"></xs:element></pre>

element ids/info/description

diagram	ids:description
namespace	http://standards.buildingsmart.org/IDS
properties	minOcc 0 maxOcc 1
source	<pre><xs:element minoccurs="0" name="description"></xs:element></pre>

element ids/info/author

eleffiellt it	element lasy into author	
diagram	ids:author	
namespace	http://standards.buildingsmart.org/IDS	
properties	minOcc 0 maxOcc 1	
source	<pre><xs:element minoccurs="0" name="author"></xs:element></pre>	

element ids/info/copyright

diagram	ids:copyright ids:copyright
namespace	http://standards.buildingsmart.org/IDS
source	<pre><xs:element name="copyright"></xs:element></pre>

element ids/info/version

diagram	ids: version
namespace	http://standards.buildingsmart.org/IDS
source	<pre><xs:element name="version"></xs:element></pre>

element ids/info/date

diagram	ids: date
namespace	http://standards.buildingsmart.org/IDS
type	xs:date
properties	content simple
source	<pre><xs:element name="date" type="xs:date"></xs:element></pre>

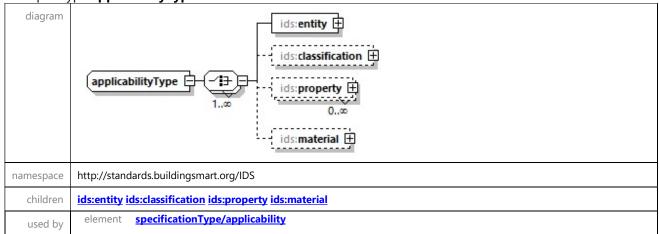
element ids/info/purpose

diagram	ids:purpose
namespace	http://standards.buildingsmart.org/IDS
properties	minOcc 0 maxOcc 1
source	<pre><xs:element min0ccurs="0" name="purpose"></xs:element></pre>

element ids/info/milestone

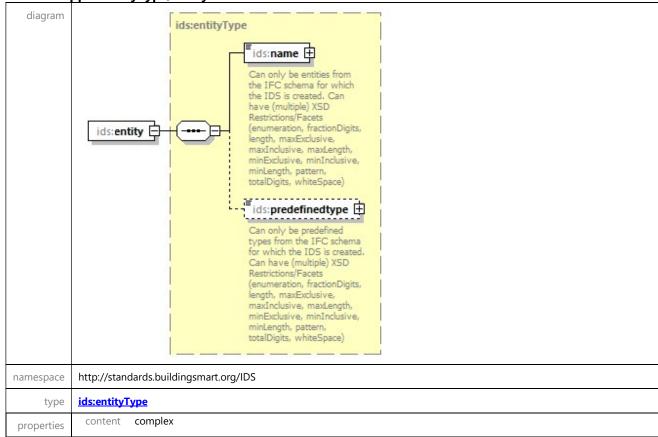
0.0		
diagram	ids:milestone	
namespace	http://standards.buildingsmart.org/IDS	
properties	minOcc 0 maxOcc 1	
source	<pre><xs:element minoccurs="0" name="milestone"></xs:element></pre>	

complexType applicabilityType



```
<xs:complexType name="applicabilityType">
source
        <xs:choice maxOccurs="unbounded">
          <xs:element name="entity" type="ids:entityType"/>
          <xs:element name="classification" type="ids:classificationType"</pre>
      minOccurs="0"/>
          <xs:element name="property" minOccurs="0" maxOccurs="unbounded">
            <xs:complexType>
               <xs:complexContent>
                 <xs:extension base="ids:propertyType"/>
               </xs:complexContent>
            </xs:complexType>
          </xs:element>
          <xs:element name="material" minOccurs="0">
            <xs:complexType>
              <xs:complexContent>
                 <xs:extension base="ids:materialType"/>
               </xs:complexContent>
            </xs:complexType>
          </xs:element>
        </xs:choice>
      </xs:complexType>
```

element applicabilityType/entity



source

children	ids:name ids:predefinedtype
source	<pre><xs:element name="entity" type="ids:entityType"></xs:element></pre>

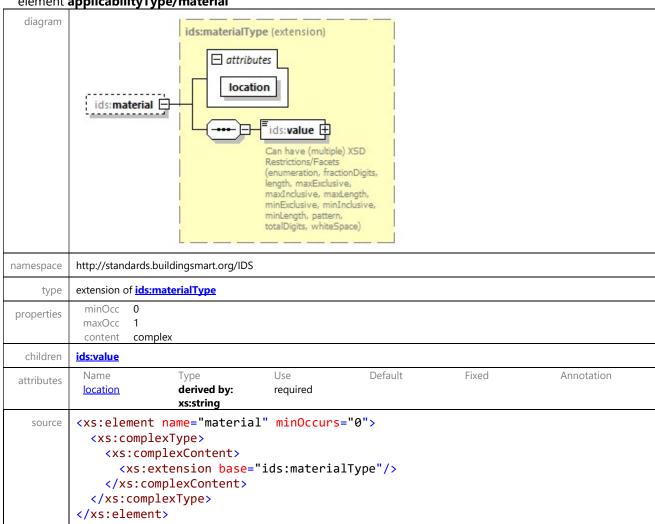
element applicabilityType/classification diagram ids:classificationType attributes location ids:value 🕀 ids:classification Can have (multiple) XSD Restrictions/Facets (enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace) ids:system 🖽 Can have (multiple) XSD Restrictions/Facets (enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace) namespace http://standards.buildingsmart.org/IDS type $\underline{ids: classification Type}$ minOcc 0 properties maxOcc content complex ids:value ids:system children Name Use Default Fixed Annotation Type attributes <u>location</u> derived by: required xs:string

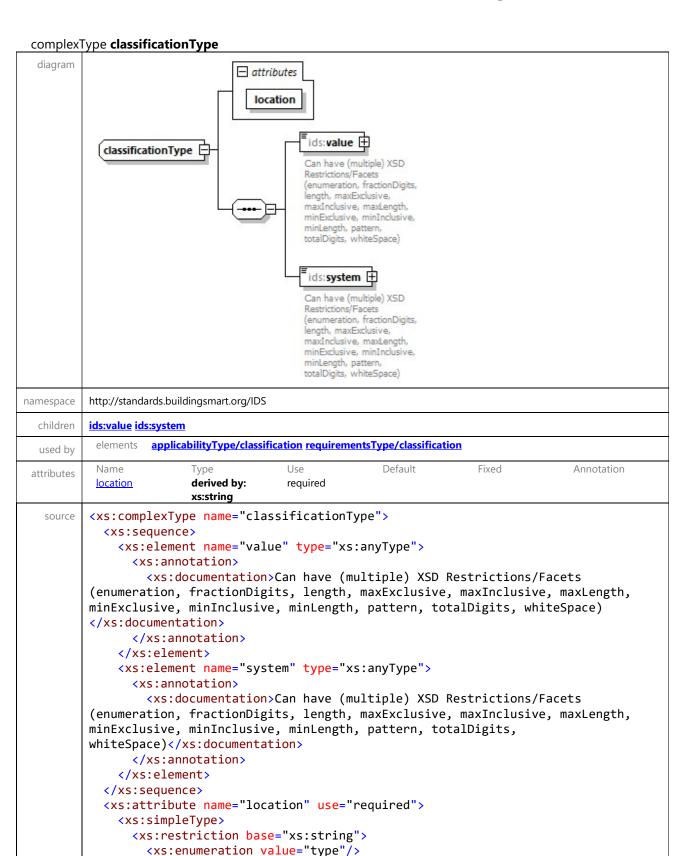
<xs:element name="classification" type="ids:classificationType" minOccurs="0"/>

</xs:element>

element applicabilityType/property diagram ids:propertyType (extension) attributes location ids:propertyset 🕀 Can have (multiple) XSD Restrictions/Facets ids:property 🗏 (enumeration, fractionDigits, length, maxExclusive, 0...0 maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace) ids:name Can have (multiple) XSD Restrictions/Facets (enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace) ids:value 🕀 Can have (multiple) XSD Restrictions/Facets (enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace) namespace http://standards.buildingsmart.org/IDS extension of ids:propertyType type minOcc 0 properties maxOcc unbounded content complex children ids:propertyset ids:name ids:value Name Use Default Fixed Annotation attributes **location** derived by: required xs:string <xs:element name="property" minOccurs="0" maxOccurs="unbounded"> source <xs:complexType> <xs:complexContent> <xs:extension base="ids:propertyType"/> </xs:complexContent> </xs:complexType>

element applicabilityType/material



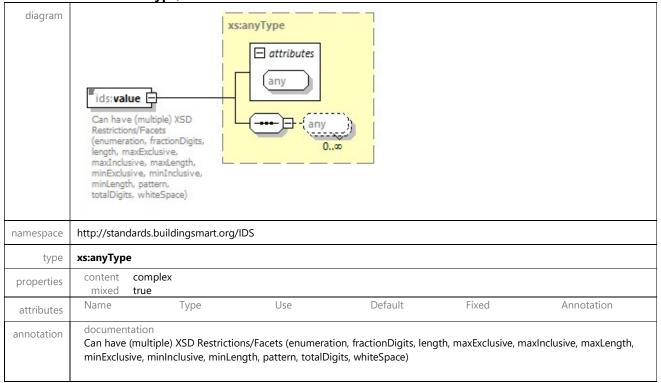


<xs:enumeration value="instance"/>

attribute classificationType/@location

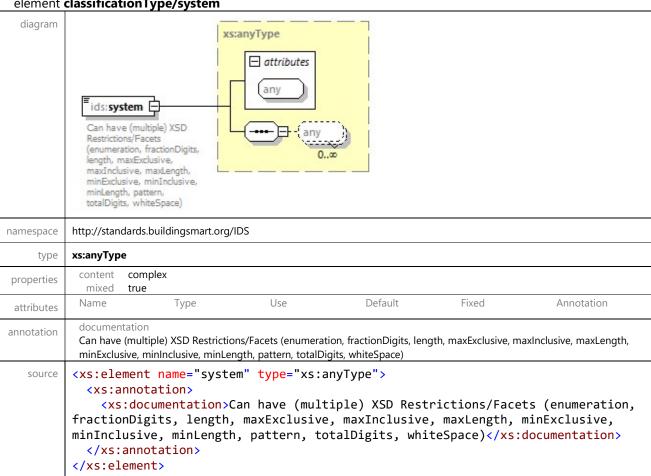
attribute	classification ype/@location
type	restriction of xs:string
properties	use required
facets	Kind Value Annotation enumeration type enumeration instance enumeration any
source	<pre><xs:attribute name="location" use="required"></xs:attribute></pre>

element classificationType/value



```
<xs:element name="value" type="xs:anyType">
source
        <xs:annotation>
          <xs:documentation>Can have (multiple) XSD Restrictions/Facets (enumeration,
      fractionDigits, length, maxExclusive, maxInclusive, maxLength, minExclusive,
      minInclusive, minLength, pattern, totalDigits, whiteSpace)
      </xs:documentation>
        </xs:annotation>
      </xs:element>
```

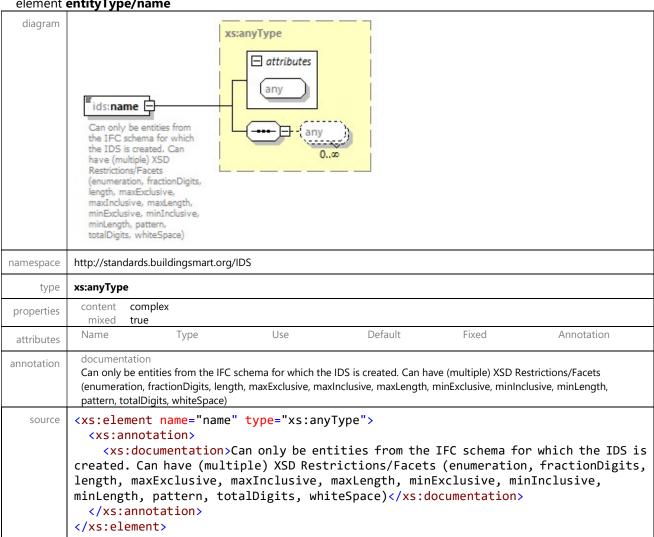
element classification Type/system



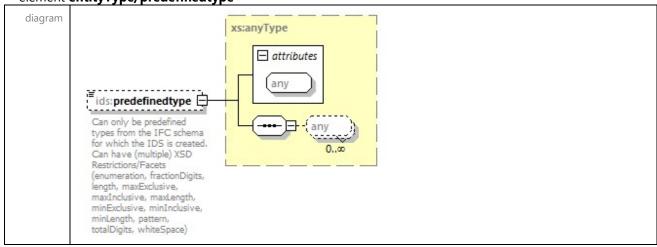
</xs:element>
</xs:sequence>
</xs:complexType>

complexType entityType diagram ids:name Can only be entities from the IFC schema for which the IDS is created. Can have (multiple) XSD Restrictions/Facets (enumeration, fractionDigits, entityType 🖃 length, maxExclusive, maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace) _____ ids:predefinedtype 🕀 Can only be predefined types from the IFC schema for which the IDS is created. Can have (multiple) XSD Restrictions/Facets (enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace) http://standards.buildingsmart.org/IDS namespace children ids:name ids:predefinedtype applicabilityType/entity requirementsType/entity used by source <xs:complexType name="entityType"> <xs:sequence> <xs:element name="name" type="xs:anyType"> <xs:annotation> <xs:documentation>Can only be entities from the IFC schema for which the IDS is created. Can have (multiple) XSD Restrictions/Facets (enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace)</xs:documentation> </xs:annotation> </xs:element> <xs:element name="predefinedtype" type="xs:anyType" minOccurs="0"> <xs:annotation> <xs:documentation>Can only be predefined types from the IFC schema for which the IDS is created. Can have (multiple) XSD Restrictions/Facets (enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace)</xs:documentation> </xs:annotation>

element entityType/name

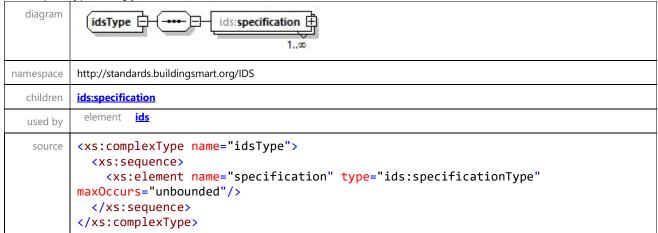


element entityType/predefinedtype

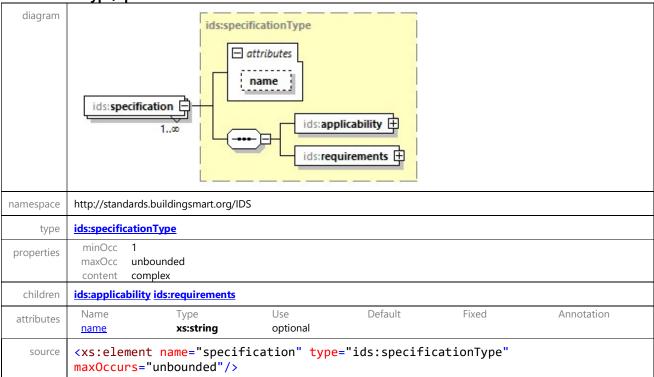


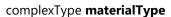
namespace	http://standards.buildingsmart.org/IDS
type	xs:anyType
properties	minOcc 0 maxOcc 1 content complex mixed true
attributes	Name Type Use Default Fixed Annotation
annotation	documentation Can only be predefined types from the IFC schema for which the IDS is created. Can have (multiple) XSD Restrictions/Facets (enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace)
source	<pre><xs:element minoccurs="0" name="predefinedtype" type="xs:anyType"></xs:element></pre>

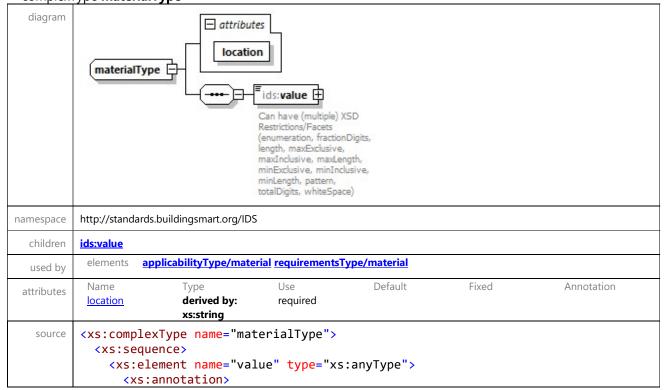
complexType idsType









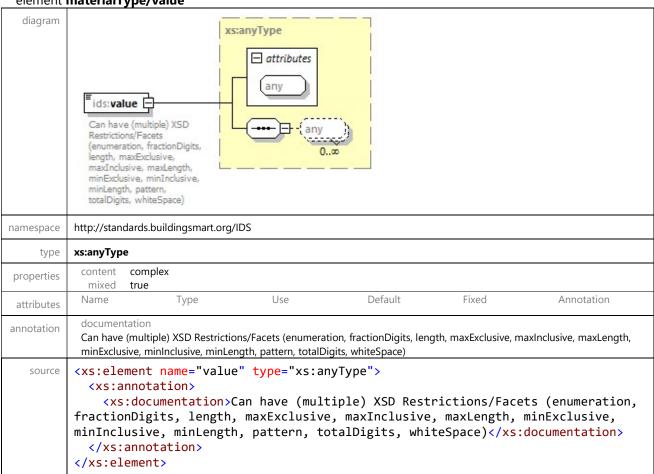


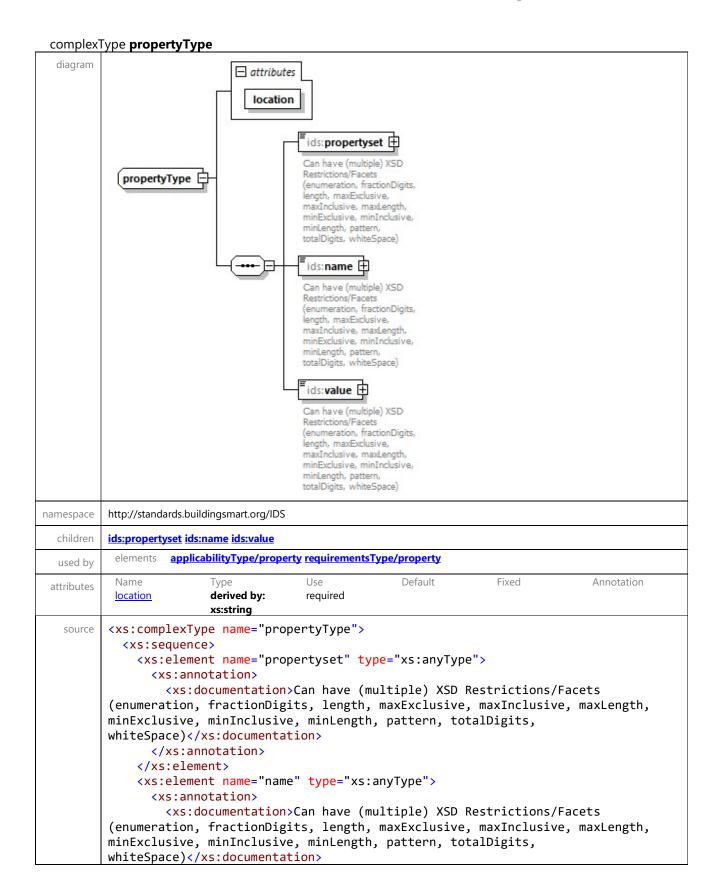
```
<xs:documentation>Can have (multiple) XSD Restrictions/Facets
(enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength,
minExclusive, minInclusive, minLength, pattern, totalDigits,
whiteSpace)</xs:documentation>
      </xs:annotation>
    </xs:element>
 </xs:sequence>
 <xs:attribute name="location" use="required">
   <xs:simpleType>
     <xs:restriction base="xs:string">
       <xs:enumeration value="type"/>
       <xs:enumeration value="instance"/>
       <xs:enumeration value="any"/>
     </xs:restriction>
   </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```

attribute materialType/@location

attribute	material Type, @ location
type	restriction of xs:string
properties	use required
facets	Kind Value Annotation enumeration type enumeration instance enumeration any
source	<pre><xs:attribute name="location" use="required"></xs:attribute></pre>

element materialType/value



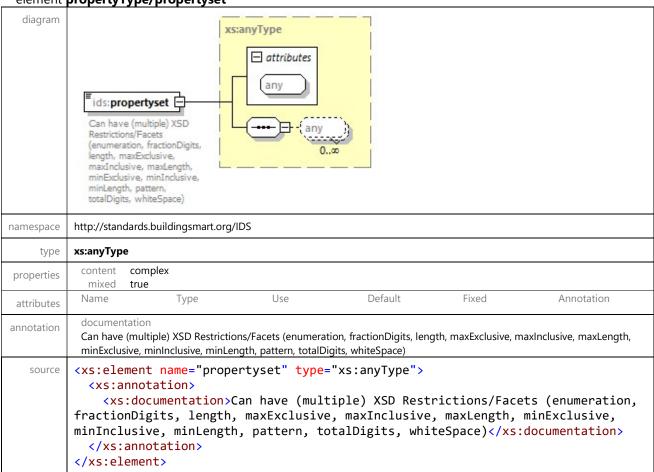


```
</xs:annotation>
    </xs:element>
    <xs:element name="value" type="xs:anyType">
      <xs:annotation>
        <xs:documentation>Can have (multiple) XSD Restrictions/Facets
(enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength,
minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace)
</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
 <xs:attribute name="location" use="required">
   <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="type"/>
        <xs:enumeration value="instance"/>
       <xs:enumeration value="any"/>
     </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
```

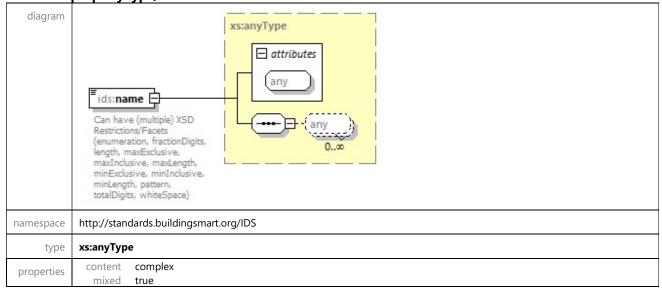
attribute propertyType/@location

attiibatt	property Type, @ location
type	restriction of xs:string
properties	use required
facets	Kind Value Annotation enumeration type enumeration instance enumeration any
source	<pre><xs:attribute name="location" use="required"></xs:attribute></pre>



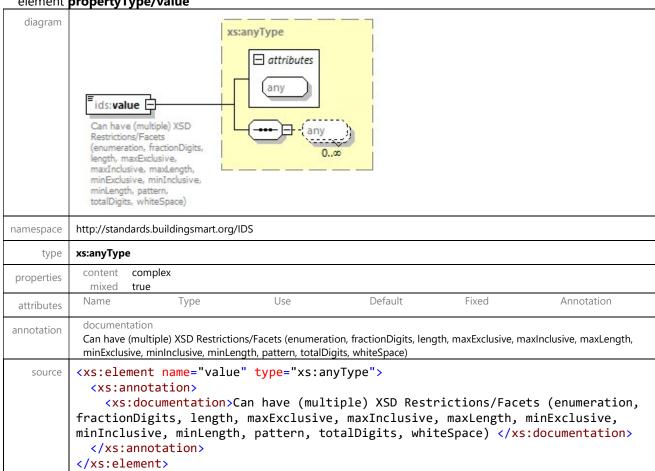


element propertyType/name



attributes	Name	Туре	Use	Default	Fixed	Annotation
annotation					gth, maxExclusive, m	axInclusive, maxLength,
source	<pre><xs:anno< td=""><td>ocumentation>C gits, length, ve, minLength octation></td><td>Can have (mult maxExclusive</td><td>· ·</td><td>, maxLength,</td><td></td></xs:anno<></pre>	ocumentation>C gits, length, ve, minLength octation>	Can have (mult maxExclusive	· ·	, maxLength,	

element propertyType/value

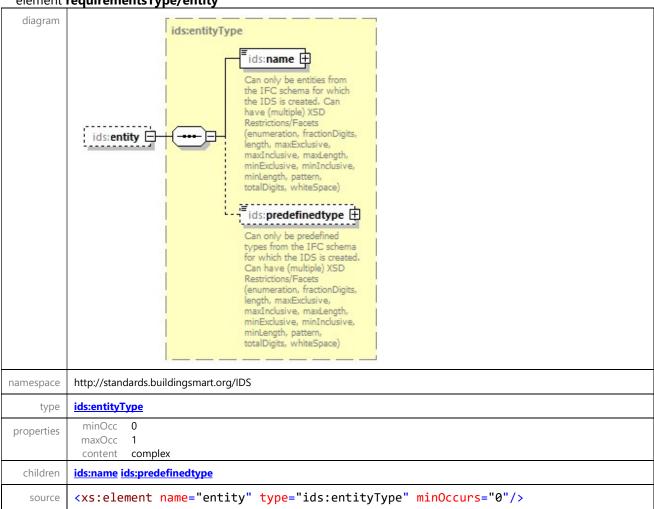


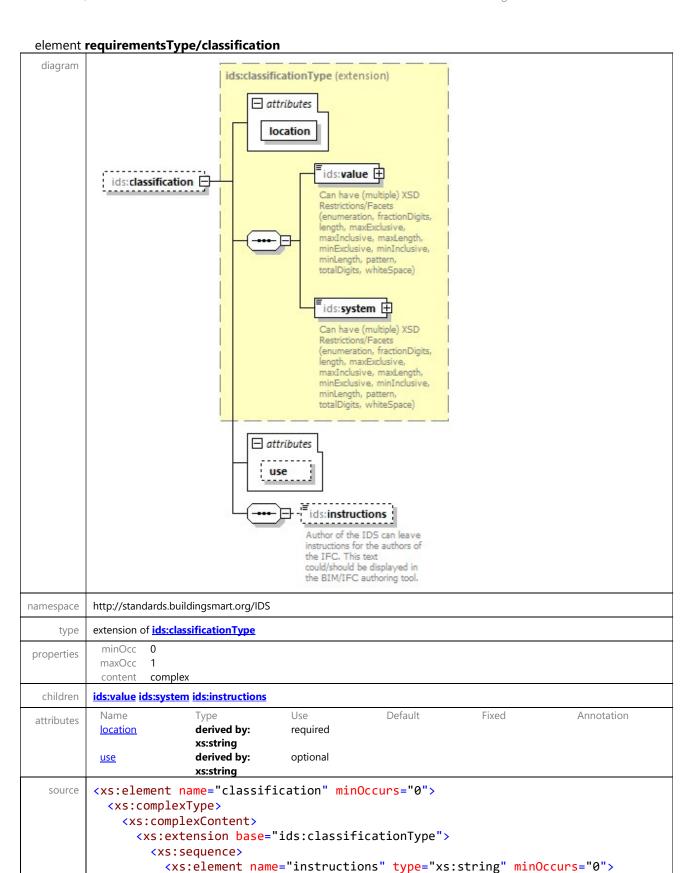
complexType requirementsType

```
diagram
                                         ids:entity ±
                                         ids:classification ±
            requirementsType [
                                         ids:property +
                                                 0..\infty
                                         ids:material +
          http://standards.buildingsmart.org/IDS
namespace
  children
          ids:entity ids:classification ids:property ids:material
                  specificationType/requirements
  used by
          <xs:complexType name="requirementsType">
   source
            <xs:choice maxOccurs="unbounded">
              <xs:element name="entity" type="ids:entityType" minOccurs="0"/>
              <xs:element name="classification" minOccurs="0">
                <xs:complexType>
                  <xs:complexContent>
                    <xs:extension base="ids:classificationType">
                       <xs:sequence>
                         <xs:element name="instructions" type="xs:string" minOccurs="0">
                           <xs:annotation>
                             <xs:documentation>Author of the IDS can leave instructions for the
          authors of the IFC. This text could/should be displayed in the BIM/IFC authoring
          tool.</xs:documentation>
                           </xs:annotation>
                         </xs:element>
                       </xs:sequence>
                       <xs:attribute name="use" use="optional">
                         <xs:simpleType>
                           <xs:restriction base="xs:string">
                             <xs:enumeration value="required"/>
                             <xs:enumeration value="optional"/>
                           </xs:restriction>
                         </xs:simpleType>
                       </xs:attribute>
                    </xs:extension>
                  </xs:complexContent>
                </xs:complexType>
              </xs:element>
              <xs:element name="property" minOccurs="0" maxOccurs="unbounded">
                <xs:complexType>
                  <xs:complexContent>
                     <xs:extension base="ids:propertyType">
                       <xs:sequence>
                         <xs:element name="instructions" type="xs:string" minOccurs="0">
                             <xs:documentation>Author of the IDS can leave instructions for the
          authors of the IFC. This text could/should be displayed in the BIM/IFC authoring
          tool.</xs:documentation>
```

```
</xs:annotation>
              </xs:element>
            </xs:sequence>
            <xs:attribute name="href" type="xs:string" use="optional"/>
            <xs:attribute name="use" use="optional">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:enumeration value="required"/>
                  <xs:enumeration value="optional"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:attribute>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
    </xs:element>
    <xs:element name="material" minOccurs="0">
      <xs:complexType>
        <xs:complexContent>
          <xs:extension base="ids:materialType">
            <xs:sequence>
              <xs:element name="instructions" type="xs:string" min0ccurs="0">
                <xs:annotation>
                  <xs:documentation>Author of the IDS can leave instructions for the
authors of the IFC. This text could/should be displayed in the BIM/IFC authoring
tool.</xs:documentation>
                </xs:annotation>
              </xs:element>
            </xs:sequence>
            <xs:attribute name="use" use="optional">
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:enumeration value="required"/>
                  <xs:enumeration value="optional"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="href" type="xs:string"/>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
    </xs:element>
  </xs:choice>
</xs:complexType>
```







```
<xs:annotation>
              <xs:documentation>Author of the IDS can leave instructions for the
authors of the IFC. This text could/should be displayed in the BIM/IFC authoring
tool.</xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:sequence>
        <xs:attribute name="use" use="optional">
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="required"/>
              <xs:enumeration value="optional"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:attribute>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
</xs:element>
```

attribute requirementsType/classification/@use

type	restriction of xs:string
properties	use optional
facets	Kind Value Annotation enumeration required enumeration optional
source	<pre><xs:attribute name="use" use="optional"></xs:attribute></pre>

element requirementsType/classification/instructions

```
diagram
                  ids:instructions
                 Author of the IDS can leave
                 instructions for the authors of
                 the IFC. This text
                 could/should be displayed in
                 the BIM/IFC authoring tool.
namespace
             http://standards.buildingsmart.org/IDS
              xs:string
      type
               minOcc
                          0
properties
               maxOcc
               content
                          simple
```

annotation	documentation Author of the IDS can leave instructions for the authors of the IFC. This text could/should be displayed in the BIM/IFC authoring tool.
source	<pre><xs:element minoccurs="0" name="instructions" type="xs:string"></xs:element></pre>

element requirementsType/property diagram ids:propertyType (extension) attributes location ids:propertyset 🕀 Can have (multiple) XSD Restrictions/Facets ids:property 🖃 (enumeration, fractionDigits, length, maxExclusive, 0...0 maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace) ids:name 🕀 Can have (multiple) XSD Restrictions/Facets (enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace) ids:value 🕀 Can have (multiple) XSD Restrictions/Facets (enumeration, fractionDigits, length, maxExclusive, maxInclusive, maxLength, minExclusive, minInclusive, minLength, pattern, totalDigits, whiteSpace) ☐ attributes href use usc ids:instructions Author of the IDS can leave instructions for the authors of the IFC. This text could/should be displayed in the BIM/IFC authoring tool. http://standards.buildingsmart.org/IDS namespace extension of ids:propertyType type minOcc properties maxOcc unbounded content complex children ids:propertyset ids:name ids:value ids:instructions Name Туре Use Default Fixed Annotation attributes

```
<u>location</u>
                      derived by:
                                    required
                     xs:string
                     xs:string
                                    optional
       href
       use
                      derived by:
                                    optional
                      xs:string
      <xs:element name="property" minOccurs="0" maxOccurs="unbounded">
source
        <xs:complexType>
           <xs:complexContent>
             <xs:extension base="ids:propertyType">
               <xs:sequence>
                 <xs:element name="instructions" type="xs:string" minOccurs="0">
                   <xs:annotation>
                     <xs:documentation>Author of the IDS can leave instructions for the
      authors of the IFC. This text could/should be displayed in the BIM/IFC authoring
      tool.</xs:documentation>
                   </xs:annotation>
                 </xs:element>
               </xs:sequence>
               <xs:attribute name="href" type="xs:string" use="optional"/>
               <xs:attribute name="use" use="optional">
                 <xs:simpleType>
                   <xs:restriction base="xs:string">
                     <xs:enumeration value="required"/>
                     <xs:enumeration value="optional"/>
                   </xs:restriction>
                 </xs:simpleType>
               </xs:attribute>
             </xs:extension>
           </xs:complexContent>
         </xs:complexType>
      </xs:element>
```

attribute requirementsType/property/@href

type	xs:string
properties	use optional
source	<pre><xs:attribute name="href" type="xs:string" use="optional"></xs:attribute></pre>

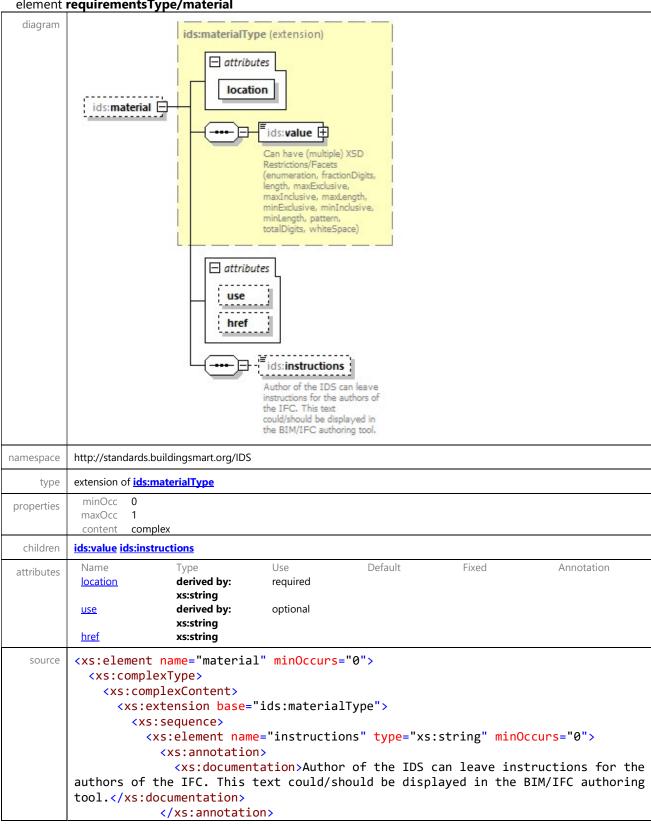
attribute requirementsType/property/@use

type	restriction of xs:string
properties	use optional
facets	Kind Value Annotation enumeration required enumeration optional
source	<pre><xs:attribute name="use" use="optional"></xs:attribute></pre>

element requirementsType/property/instructions

element requirements Type/property/instructions		
diagram	ids:instructions Author of the IDS can leave instructions for the authors of the IFC. This text could/should be displayed in the BIM/IFC authoring tool.	
namespace	http://standards.buildingsmart.org/IDS	
type	xs:string	
properties	minOcc 0 maxOcc 1 content simple	
annotation	documentation Author of the IDS can leave instructions for the authors of the IFC. This text could/should be displayed in the BIM/IFC authoring tool.	
source	<pre><xs:element minoccurs="0" name="instructions" type="xs:string"></xs:element></pre>	

element requirementsType/material



attribute requirementsType/material/@use

attribute requirements type, material, & use	
type	restriction of xs:string
properties	use optional
facets	Kind Value Annotation enumeration required enumeration optional
source	<pre><xs:attribute name="use" use="optional"></xs:attribute></pre>

attribute requirementsType/material/@href

type	xs:string
source	<pre><xs:attribute name="href" type="xs:string"></xs:attribute></pre>

element requirementsType/material/instructions

```
diagram

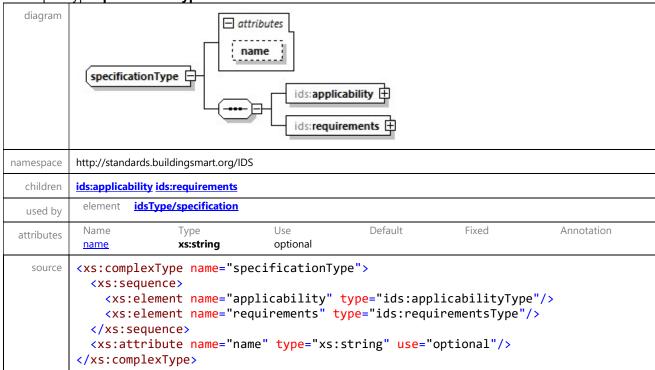
Author of the IDS can leave instructions for the authors of the IFC. This text could/should be displayed in the BIM/IFC authoring tool.

namespace http://standards.buildingsmart.org/IDS

type xs:string
```

properties	minOcc 0
p. op c. c. cs	maxOcc 1
	content simple
annotation	documentation
difficultion	Author of the IDS can leave instructions for the authors of the IFC. This text could/should be displayed in the BIM/IFC authoring tool.
source	<pre><xs:element minoccurs="0" name="instructions" type="xs:string"> <xs:annotation></xs:annotation></xs:element></pre>
	<pre><xs:documentation>Author of the IDS can leave instructions for the authors of the IFC. This text could/should be displayed in the BIM/IFC authoring</xs:documentation></pre>
	<pre>tool. </pre>

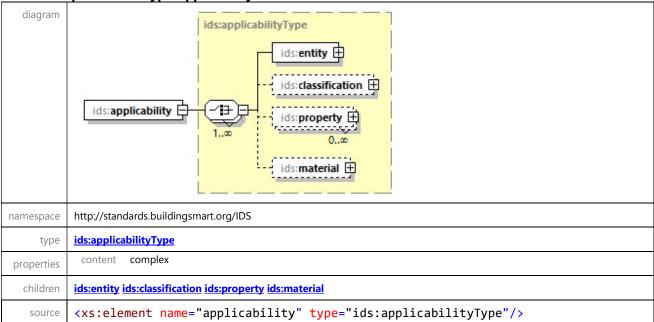
complexType **specificationType**



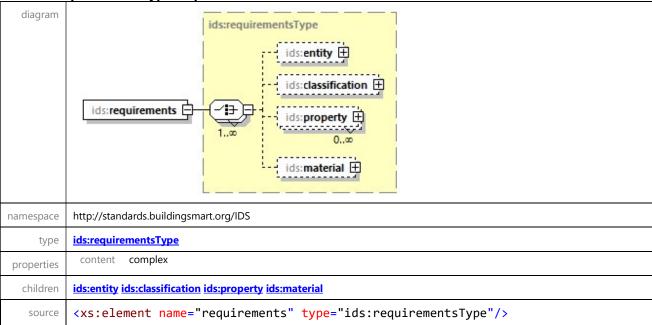
attribute specificationType/@name

type	xs:string
properties	use optional
source	<pre><xs:attribute name="name" type="xs:string" use="optional"></xs:attribute></pre>

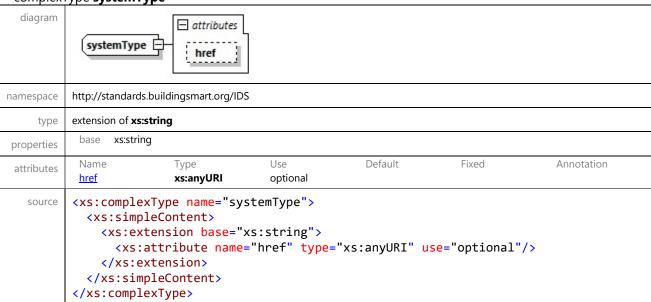




element specificationType/requirements



complexType **systemType**



attribute systemType/@href

attribate	system: ype, e.m.e.
type	xs:anyURI
properties	use optional
source	<pre><xs:attribute name="href" type="xs:anyURI" use="optional"></xs:attribute></pre>