

### 7.1.1 ContentIdentifier

#### Summary

A canonical, unique, immutable identifier

#### Description

A ContentIdentifier is a canonical, unique, immutable identifier of the content of a software artifact, such as a package, a file, or a snippet.

It can be used for verifying its identity and integrity.

#### Metadata

<https://spdx.org/rdf/3.0.1/terms/Software/ContentIdentifier>

Name	ContentIdentifier
Instantiability	Concrete
SubclassOf	/Core/IntegrityMethod

#### Superclasses

- /Core/IntegrityMethod

#### Properties

Property	Type	minCount	maxCount
contentIdentifierType	ContentIdentifierType	1	1
contentIdentifierValue	xsd:anyURI	1	1

#### All properties

Property	Type	minCount	maxCount
comment	xsd:string	0	1
contentIdentifierType	ContentIdentifierType	1	1
contentIdentifierValue	xsd:anyURI	1	1

Add details of missing class of ContentIdentifier

## 9.1 Software Profile Classes

### 9.1.1 File

#### Summary

Refers to any object that stores content on a computer.

#### Description

Refers to any object that stores content on a computer. The type of content can optionally be provided in the contentType property.

If the isDirectory property is specified and set to true, then the file represents a directory and all content stored in that directory.

#### Metadata

<https://spdx.org/rdf/v3/Software/File>

Name	File
Instantiability	Concrete
SubclassOf	/Software/SoftwareArtifact

#### Properties

Property	Type	minCount	maxCount
contentType	/Core/MediaType	0	1
isDirectory	xsd:boolean	0	1

### 9.1.2 Package

#### Summary

Refers to any unit of content that can be associated with a distribution of software.

#### Description

A package refers to any unit of content that can be associated with a distribution of software. Typically, a package is composed of one or more files.

Any of the following non-limiting examples may be (but are not required to be) represented in SPDX as a package:

- a tarball, zip file or other archive
- a directory or sub-directory
- a separately distributed piece of software which another Package or File uses or depends upon (e.g., a Python package, a Go module, ...)
- a container image, and/or each image layer within a container image
- a collection of one or more sub-packages
- a Git repository snapshot from a particular point in time

Note that some of these could be represented in SPDX as a file as well.

#### Metadata

<https://spdx.org/rdf/v3/Software/Package>

Name	byteRange
Nature	DataProperty
Range	/Core/PositiveIntegerRange

Replace contentType with contentIdentifier, contentIdentifierType, and contentIdentifierTypeValue to provide more expression about content

**Referenced**

- /Software/Snippet

## 9.2.4 contentType

**Summary**

Provides information about the content type of an Element.

**Description**

This field is a reasonable estimation of the content type of the Element, from a creator perspective. Content type is intrinsic to the Element, independent of how the Element is being used.

**Metadata**

<https://spdx.org/rdf/v3/Software/contentType>

Name	contentType
Nature	DataProperty
Range	/Core/MediaType

**Referenced**

- /Software/File

## 9.2.5 copyrightText

**Summary**

Identifies the text of one or more copyright notices for a software Package, File

**Description**

A copyrightText consists of the text(s) of the copyright notice(s) found for a s

If a copyrightText contains text, then it may contain any text related to one or complete) for that software Package, File or Snippet.

If a copyrightText has a "NONE" value, this indicates that the software Packa notice whatsoever.

If a copyrightText has a "NOASSERTION" value, this indicates that one of tl creator has att empted to but cannot reach a reasonable objective determinatio empt to determine this field; or \* the SPDX data creator has intentionally prov implied by doing so).

**Metadata**

<https://spdx.org/rdf/v3/Software/copyrightText>

Name	copyrightText
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System Package Data Exchange (SPDX), v3.0 – beta 1

## 7.2.4 contentIdentifier

**Summary**

A canonical, unique, immutable identifier of the artifact content, that may be used for verifying its identity and/or integrity.

**Description**

A contentIdentifier is a canonical, unique, immutable identifier of the content of a software artifact, such as a package, a file, or a snippet.

It may be used for verifying its identity and/or integrity.

**Metadata**

<https://spdx.org/rdf/3.0.1/terms/Software/contentIdentifier>

Name	contentIdentifier
Nature	DataProperty
Range	ContentIdentifier

**Referenced**

- /Software/SoftwareArtifact

## 7.2.5 contentIdentifierType

**Summary**

Specifies the type of the content identifier.

## 7.2.6 contentIdentifierValue

**Summary**

Specifies the value of the content identifier.

**Description**

A contentIdentifierValue specifies the value of a content identifier.

**Metadata**

<https://spdx.org/rdf/3.0.1/terms/Software/contentIdentifierValue>

Name	contentIdentifierValue
Nature	DataProperty
Range	xsd:anyURI

**Referenced**

- /Software/ContentIdentifier