

# Airspace

Each .aip file reflects the current openAIP database for a specific content type and is standard XML, UTF-8 encoded. Hereafter all possible elements that are used in the .aip format for the airspace content type are described.

Example of a valid .aip airspace file that contains one airspace of the category "WAVE":

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<OPENAIP VERSION="367810a0f94887bf79cd9432d2a01142b0426795" DATAFORMAT="1.1">
<AIRSPACES>
<ASP CATEGORY="WAVE">
  <VERSION>367810a0f94887bf79cd9432d2a01142b0426795</VERSION>
  <ID>18024</ID>
  <COUNTRY>DE</COUNTRY>
  <NAME>ALB-OST</NAME>
  <ALTLIMIT_TOP REFERENCE="STD">
    <ALT UNIT="FL">100</ALT>
  </ALTLIMIT_TOP>
  <ALTLIMIT_BOTTOM REFERENCE="STD">
    <ALT UNIT="FL">75</ALT>
  </ALTLIMIT_BOTTOM>
  <GEOMETRY>
    <POLYGON>9.62555555555556 48.5625, 9.84777777777778 48.6594444444444, 9.8488590649036 48.671520456103, 9.8491357659723 48.676179034
  </GEOMETRY>
</ASP>
</AIRSPACES>
</OPENAIP>
```

## Declaration statement

Every .aip file starts with a standard XML declaration statement like the one below, followed by the root element <OPENAIP> that contains all other child elements.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes">
```

## <OPENAIP> ... </OPENAIP>

```
<OPENAIP VERSION="362100" DATAFORMAT="1.1">
...
</OPENAIP>
```

XML element name	data string	description	XML parent name	has childs	required	count	attributes	possible values
OPENAIP	child elements	The .aip XML root element. -	-	yes	yes	1	yes	undefined

Attributes:

attribute name	type	description	required	possible values
VERSION	integer	Current openAIP database version.	yes	undefined
DATAFORMAT	numeric	Currently used data format version.	yes	undefined

## <AIRSPACES>...</AIRSPACES>

```
<AIRSPACES>
...
</AIRSPACES >
```

XML element name	data string	description	XML parent name	has childs	required	count	attributes	possible values
AIRSPACES	child elements	This indicates the content type that is described in this .aip file. Use AIRSPACES for airspaces.	OPENAIP	yes	yes	1	no	undefined

## <ASP>...</ASP >

```
<ASP CATEGORY="WAVE">
...
</ASP>
```

XML element name	data string	description	XML parent name	has childs	required	count	attributes	possible values
ASP	child elements	Element that holds all information for one airspace.	AIRSPACES	yes	yes	1-n	yes	undefined

Attributes:

attribute name	type	description	required	possible values
				value description
				A
				B
				C
				CTR
				D
				DANGER
				E
				F
				G
CATEGORY	string	The airspace category.	yes	GLIDING
				OTH
				RESTRICTED
				TMA
				TMZ
				WAVE
				PROHIBITED
				FIR
				UIR
				RMZ

<VERSION>...</VERSION>

<VERSION>367810a0f94887bf79cd9432d2a01142b0426795</VERSION>

XML element name	data string	description	XML parent name	has childs	required	count	attributes	possible values
VERSION	string	This is an openAIP specific value that represents the git commit ID that included this airspace. Can be omitted if not used to import into openAIP.	ASP	no	yes	1	no	undefined

<ID>...</ID>

<ID>18024</ID>

XML element name	data string	description	XML parent name	has childs	required	count	attributes	possible values
ID	integer	This is an openAIP specific value that represents the internal ID of this airspace. Can be omitted if not used to import into openAIP.	ASP	no	yes	1	no	undefined

<COUNTRY>...</COUNTRY>

<COUNTRY>DE</COUNTRY>

XML element name	data string	description	XML parent name	has childs	required	count	attributes	possible values
COUNTRY	string	The airspace's ISO 3166-1 alpha-2 country code.	ASP	no	yes	1	no	See ISO 3166-1 specs

<NAME>...</NAME>

<NAME>ALB-OST</NAME>

XML element name	data string	description	XML parent name	has childs	required	count	attributes	possible values
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NAME	string	The airspace name. ASP	no	yes	1	no	undefined
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<ALTLIMIT\_TOP>...</ALTLIMIT\_TOP >

<ALTLIMIT\_TOP REFERENCE="STD">

...

</ALTLIMIT\_TOP>

XML element name	data string	description	XML parent name	has childs	required count attributes			possible values
ALTLIMIT_TOP	child elements	Defines the airspace upper ceiling.	ASP	yes	yes	1	yes	undefined

Attributes:

attribute name	type	description	required possible values		
			value	description	
REFERENCE	string	The reference plane for this airspace altitude value.	yes	GND	Ground
				MSL	Main sea level
				STD	Standard atmosphere

<ALT>...</ALT >

<ALT UNIT="FL">100</ALT>

XML element name	data string	description	XML parent name	has childs	required count attributes			possible values
ALT	child elements	Altitude value of the airspace.	ALTLIMIT_TOP	no	yes	1	yes	undefined

Attributes:

attribute name	type	description	required	possible values	
				value	description
UNIT	string	The altitude unit.	yes	F	Feet
				FL	Flight level

<ALTLIMIT\_BOTTOM>...</ALTLIMIT\_BOTTOM >

<ALTLIMIT\_BOTTOM REFERENCE="STD">

...

</ALTLIMIT\_BOTTOM>

XML element name	data string	description	XML parent name	has childs	required count attributes			possible values
ALTLIMIT_BOTTOM	child elements	Defines airspace lower ceiling.	ASP	yes	yes	1	yes	undefined

Attributes:

attribute name	type	description	required possible values		
			value	description	
REFERENCE	string	The reference plane for this airspace altitude value.	yes	GND	Ground
				MSL	Main sea level
				STD	Standard atmosphere

<ALT>...</ALT >

<ALT UNIT="FL">100</ALT>

XML element name	data string	description	XML parent name	has childs	required count attributes			possible values
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ALT	child elements	Altitude value of the airspace.	ALTLIMIT_BOTTOM	no	yes	1	yes	undefined
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Attributes:

attribute name	type	description	required	possible values	
				value	description
UNIT	string	The altitude unit.	yes	F	Feet
				FL	Flight level

**<GEOMETRY>...</GEOMETRY>**

<GEOMETRY>

...

&lt;/GEOMETRY&gt;

XML element name	data string	description	XML parent name	has childs	required	count	attributes	possible values
GEOMETRY	child elements	Holds the airspace geometry element. Currently only POLYGON is allowed. Other types may follow.	ASP	yes	yes	1	no	undefined

**<POLYGON>...</POLYGON>**

<POLYGON>9.62555555555556 48.5625, 9.84777777777778 48.6594444444444, 9.8488590649036 48.671520456103, 9.8491357659723 48.67617903476

XML element name	data string	description	XML parent name	has childs	required	count	attributes	possible values
POLYGON	string	The airspace geometry. Currently only POLYGON is allowed. The polygon must be a "valid" simple geometry (see OGC specification). Please note that the start and endpoint must be identical!	GEOMETRY	no	yes	1	no	undefined