
# Isartor Test Suite for PDF/A-1b
**Version 1.0**
**August 2008**

PDF/A Competence Center

# 1 Purpose of the Isartor Test Suite

## Introduction

This is the documentation for the Isartor[1] (first sound is *Ee*, second syllable rhymes with *for)* test suite. This test suite comprises a set of files which can be used to check the conformance of software regarding the PDF/A-1 standard. More precisely, the Isartor test suite can be used to "validate the validators": It deliberately violates the requirements of PDF/A-1 in a systematic way in order to check whether PDF/A-1 validation software actually finds the violations.

PDF/A-1 test files can be organized in four categories according to the following table:

| Name of the test suite quadrant | Documents conform to PDF/A-1? | purpose |
|---|---|---|
| PDF/A-1b FAIL | no | deliberately violate all possible aspects of PDF/A-1 conformance, and check whether PDF/A-1 validation software correctly identifies the reasons for non-conformance |
| PDF/A-1a FAIL | no | |
| PDF/A-1b PASS | yes | create PDF/A-conforming documents with uncommon features or combinations of features and check whether PDF/A-1 validation software correctly identifies the documents as standard conforming |
| PDF/A-1a PASS | yes | |

The present installment of the Isartor test suite implements the PDF/A-1b FAIL quadrant. It does not cover any of the other quadrants, although it is envisioned that future installments will expand quadrant coverage.

## Basic Principles

The Isartor test suite has been constructed according to the following basic principles:

- Atomic: A test file attempts to examine a particular aspect of the standard. Wherever possible test files avoid to touch more than one aspect of the standard.

1. The Isartor test suite is named after the location of the first meeting of the TWG (see chapter 5, "Who created the Test Suite?", page 10), a medieval gate towards the river Isar in the center of Munich/Germany, see for example www.munich-info.de/portrait/p_isartor_en.html.

- Complete: The Isartor test suite provides full coverage of all requirements in the PDF/A-1 standard.
- Self-documenting: The test files contain intrinsic information about the expected result of performing the test.
- Traceable: Each test is based on a specific clause in PDF/A-1 which can easily be identified.
- Reproducible: All test files (with only a few exceptions) have been created programmatically with a documented change history. This creation process support reproducibility.

Through a rigid quality assurance and testing process a lot of effort has been spent to make sure that all test files adhere to these basic principles.

## What the Test Suite checks

The Isartor test suite for PDF/A-1b deliberately violates each requirement of the PDF/A-1b standard in order to check whether validation software detects all possible kinds of violation of the standard requirements, and whether it provides appropriate explanation for rejected nonconforming documents.

A PDF/A validator which completely passes the Isartor test suite is known to implement all required checks. However, it does not necessarily always apply these checks in the required way (see section “What the Test Suite doesn’t do”, page 4).

For the sake of simplicity, only a single aspect of the standard is violated at a time. However, in a few cases this is not possible because of interdependencies among multiple aspects of the standard. For example, a particular test triggers the message “malformed XMP document metadata” by including damaged metadata. In addition to this expected message, validators may report subsequent problems which depend on the initial problem, such as a missing PDF/A identification entry (which is supposed to be present in the metadata) and synchronized document info entries (which are also expected within the metadata).

The test requirements (assertions) are the inverse of requirements in the standard. For example, PDF/A-1 mandates that fonts be embedded, so the test suite contains several documents where the fonts are deliberately not embedded. PDF/A validators must report this standard violation in order to pass the test.



## What the Test Suite doesn't do

While the Isartor test suite covers many aspects, it does not cover all requirements one might have regarding PDF/A-1 validation:

- PDF/A-1 adds specific requirements on top of the PDF 1.4 file format. PDF itself is a highly complex file format, and a full test suite for PDF is beyond the scope of the Isartor test suite. The Isartor test suite assumes valid PDF 1.4, and only checks PDF/A-1 violations on top of this. It does not check violations of PDF requirements which are stated outside of PDF/A-1.
  Example: if a document contains CCITT-compressed image data and the compressed data does not conform to the CCITT compression standard, this is considered a PDF violation and not a PDF/A violation. Consequently, the Isartor test suite does not check this case.
- As discussed in the introduction, the current installment of the Isartor test suite is focused on FAIL tests, i.e. deliberate violations of the PDF/A-1b standard. The test suite does not check whether validators accept all valid flavors of PDF/A. This is within the scope of possible future PASS quadrants of the test suite.
- The Isartor test suite does not cover any aspects of PDF/A-conforming viewing.
- While the Isartor test suite checks many individual items, it ignores possible problems caused by the interaction between standards violations or PDF features.
  Example: While a validator might recognize standard violation A, it might overlook the same violation A if another violation B is present in the same document, or it might overlook violation A in the presence of some PDF feature C.
- The Isartor does not prioritize topics. It is up to you to judge whether a particular flaw in a PDF/A validator is relevant in your situation or not, and what the consequences of the flaw might be.
- Optional items in the standard ("should" clauses) are not tested since validators are not required to check them.

# 2 Organization of the Test Suite

Since the Isartor test suite comprises a large number of individual files it is important to use a consistent scheme for organizing and naming the directories and files contained in the test suite.

The most natural guideline for organizing the test suite files is, of course, the PDF/A-1 standard itself. The test files are arranged in directories, where each directory corresponds to a particular clause of the PDF/A-1 standard. Such a directory contains all tests relevant to this particular clause. Directories are numbered and named according to the clauses and sub-clauses of the standard, e.g.:

```
6.3.4 Embedded font programs
```

Since not all standard clauses contain document requirements (e.g. some clauses contain optional features, others describe viewer requirements) not all clauses are represented in the directory scheme.

A test file uses a file name like in the following example:

```
isartor-6-7-8-t02-fail-a.pdf
```

This test is related to section 6.7.8 “Extension schemas” of ISO 19005-1 and violates the second “should” clause (topic 02).

More formally, Isartor test file names are structured as follows:

isartor-<*clause*>-t<*topic*>-<*expected result*>-<*instance*>.pdf

The components of the file name are as follows:

**isartor**
The name of the PDF/A-1 test suite. It contains the constant text *isartor*.

**<clause>**
The section number of the appropriate section in the ISO 19005-1 standard, where numbers are separated by dashes, e.g. section 6.5.2 will map to 6-5-2.

Note that not all sections in the standard have corresponding tests. There are several reasons for this, e.g. some sections contain only optional items, but not strict requirements, some include requirements for PDF/A viewers, etc.

**<topic>**
Sections of the ISO 19005-1 document which include more than one “shall” or “shall not” phrase require more than one test file. Such incarnations of a test are called topic, and will be numbered starting at 01. The letter “t” is prepended to avoid confusion between section and topic numbers.

**<expected result>**
This indicates whether the test file is expected to *fail* or *pass* PDF/A validation. For the current installment of the Isartor test suite it will always be *fail*.

**<instance>**
Some topics may be violated in different ways. Such variations of a topic are called instance, and are numbered with letters starting at *a*.

# 3 Contents of Test Files

All test files are based on a common template which specifies page contents and other aspects.

## Document and Page Contents

Regarding the page contents, Isartor test files appear quite boring: In most cases the pages are empty, contain a single line of text or some simple graphics element. Do not attempt to read or otherwise consume the page contents of the test file - there is nothing of interest in there! The page contents (if present at all) serve the single purpose of providing some footing for the technical characteristic of the test. For example, in order to check the behavior of unembedded fonts there must be some text available.

Test files do not contain any metadata (document info entries or XMP metadata) or interactive elements unless required by PDF/A or by the specific test.

## Bookmarks

The test files are self-describing and contain some information about the test. In order to avoid and conflicts with requirements of the PDF/A standard we chose bookmarks to carry that information. This choice is based on the fact that the PDF/A standard does not impose any restrictions nor requirements on the use of bookmarks, so it is safe to use bookmarks to convey information about a test without interfering with PDF/A validation.

The bookmarks in a test file are arranged according to the following example:

```
PDF/A test suite: isartor-6-7-8-t01-fail-a
   clause 6-7-8 Properties
   topic 01
   instance a
   expected result: fail
   expected message: extension schema doesn't have description
                     embedded
```

In other words, the first (main) bookmark contains the full test name. The subordinate bookmarks repeat the values of the clause, topic and instance numbers/letters of the test, and the last bookmark contains the expected message (see section “How to read the Expected Message”, page 9).

# 4 How to use the Test Suite

## Basic Procedure

It is strongly recommended to obtain a copy of the PDF/A-1 standard ISO 19005-1 [1], the Technical Corrigendum 1 [2], and all PDF/A TechNotes [5] when working with the PDF/A test suite. There are two main scenarios for using the test suite:

- Individual test: You suspect that a particular validator does not implement a test for standard criterion X. Pick the corresponding test file(s) from the test suite and run it through the validator in order to find out whether or not a check is implemented in the validator, and whether it delivers the expected result.
- Full check: Run all test files through a validator to determine the coverage of standard clauses implemented in the validator. In most cases the validator should find only a single problem. However, some files will trigger more than one reported conformance violation due to interdependencies between the test (see section "What the Test Suite checks", page 3).

While some validators can be used to check single files interactively, some offer a batch mode which checks multiple files at once without any intermediate user interaction. Using such a batch mode makes sense for the Isartor test suite because of the large number of files.

When systematically testing PDF/A validation software against the Isartor test suite we recommend to record the following pieces of information for each test file:

- Was the test file accepted as conforming PDF/A-1, or rejected as non-conforming?
  Expected result: all files in the PDF/A-1b FAIL suite should be flagged as non-conforming documents since they violate the standard.
- For rejected files: Which message (reason for the rejection) was provided?
  Expected result: the reason should be similar to the "expected message" provided by a bookmark in the test.
- If a file could not be processed: Which other information is available? E.g. the software crashed, issued an unspecific message, etc.

## How to read the Expected Message

Each test file corresponds to an "expected message" which is provided as a bookmark in the test file itself, and can be read in Appendix A: List of Test Suite Files, page 14. The expected messages are based on the technical language used in the PDF Reference [1] and the ISO 19005-1 standard. For this reason they may not be intuitive to the average user. In many cases, PDF/A validators will provide a message with slightly different wording which obviously contains the same information. In other cases, however, the validator may present the result of conformance testing with a wording which more or less deviates from the test's "expected message". In extreme cases, expert advice may be required to determine whether or not the reported message actually reflects the problem present in the test file.



# 5 Who created the Test Suite?

## Project Background

The Isartor test suite is a project of the PDF/A Competence Center, a cross-vendor organization which promotes the use of PDF/A (see www.pdfa.org). Test suite development has been carried out by the Technical Working Group (TWG) of the PDF/A Competence Center. Members of the TWG are volunteers from member companies of the PDF/A Competence Center. All companies who send TWG delegates are software vendors. Individual TWG members are experts in the field of PDF and/or standardization. Most members are involved in the design, development, and testing of software for creating, processing, or validating PDF/A documents. Several TWG members are also members of TC 171 SC2, the ISO committee which defined PDF/A-1 and is now working on PDF/A-2.

One of the main goals of the TWG is to achieve a common interpretation of the PDF/A-1 standard. To this end, TWG issued a number of TechNotes on PDF/A issues which clarify important aspects of the standard. The PDF/A TechNotes form an important basis of the Isartor test suite[1].

Design and structure of the Isartor test suite have been devised by the TWG. Test files have been created by a core group after thoroughly discussing the respective criteria in the standard. All test files have been formally reviewed by at least two other members of the TWG.

Design and planning has been carried out in the first half of 2007, implementation took place between mid-2007 and mid-2008. Incidentally, this coincided with the implementation of the PDF/A-1 Preflight feature in Acrobat 9. There where lots of productive interactions between test suite work and Preflight development.

Various software tools have been used for creating the test suite files. Usually, some modification has been applied to the PDF creation software to create non-conforming PDF/A documents, or the PDF documents have been postprocessed in order to deliberately violate the target criterion of the respective test.

1. The PDF/A TechNotes [5] are available at www.pdfa.org free of charge.

## Acknowledgements

Isartor test suite files have been contributed by the following founding members of the PDF/A Competence Center:

PDF Tools AG (www.pdf-tools.com)
PDFlib GmbH (www.pdflib.com)
callas software GmbH (www.callassoftware.com)

Extensive reviews of the test suite have been performed by the above companies plus the following:

intarsys consulting GmbH (www.intarsys.de)
SEAL Systems AG (www.sealsystems.de)

# Bibliography

[1] ISO 19005-1: Document management — Electronic document file format for long-term preservation — Part 1: Use of PDF 1.4 (PDF/A-1)
www.iso.ch

[2] ISO 19005-1: Document management — Electronic document file format for long-term preservation — Part 1: Use of PDF 1.4 (PDF/A-1)
Technical Corrigendum 1, published 2007-04-01
www.iso.ch

[3] PDF Reference: Adobe Portable Document Format, Version 1.4, Adobe Systems Incorporated – 3rd ed. (ISBN 0-201-75839-3).
www.aiim.org/documents/standards/PDFreference.pdf

[4] XMP Specification, January 2004, Adobe Systems Incorporated.
www.aiim.org/documents/standards/xmpspecification.pdf

[5] Several Technical Notes on PDF/A, PDF/A Competence Center
www.pdfa.org/doku.php?id=pdfa:en:techdoc

# Terms of Use

The Isartor test suite is available from www.pdfa.org free of charge. The PDF/A Competence Center, developer of the test suite, holds all rights in the test suite contents and its associated documentation. The following rights are granted free of charge to anyone:

- The right to use the Isartor test suite to check PDF validation software.
- The right for a software vendor or distributor to issue a declaration to the effect that the software produced or distributed by the vendor or distributor partially or completely conforms to the Isartor test suite. A detailed list of test results must be made available as part of the declaration.
- The right to analyze the internal structure of the files comprising the Isartor test suite with the sole purpose of determining PDF/A conformance.

All other rights are reserved, and other uses are not covered by these terms of use. For clarity, using the Isartor test suite as the basis for certifying third-party products (i.e. the software vendor/distributor and the certifying agency are separate entities) is not allowed. Redistributing all or parts of the Isartor test suite is also not allowed.

Using the Isartor test suite in a way which is not covered by the list of free rights above requires a written license agreement with the PDF/A Competence Center.



# Contact

Please contact info@pdfa.org if you have any questions regarding the contents of this document or the terms of use and redistribution policy.

# Status of this Document

2008-08-12 First released version

# Appendix A: List of Test Suite Files

The table below lists the file names and expected messages of all 204 test files in the PDF/A-1b FAIL Isartor test suite.

| test name | expected message |
|---|---|
| isartor-6-1-2-t01-fail-a | Document does not start with % character |
| isartor-6-1-2-t02-fail-a | File header line not followed by % and 4 characters > 127 |
| isartor-6-1-3-t01-fail-a | The trailer dictionary does not contain ID |
| isartor-6-1-3-t02-fail-a | Trailer dictionary contains Encrypt |
| isartor-6-1-3-t03-fail-a | Data after last EOF marker |
| isartor-6-1-3-t04-fail-a | Linearized file: ID in 1st page and last trailer different |
| isartor-6-1-4-t01-fail-a | Subsection header: starting object number and range not separated by a single space |
| isartor-6-1-4-t02-fail-a | 'xref' and cross reference subsection header not separated by a single EOL marker |
| isartor-6-1-6-t01-fail-a | Invalid hexadecimal strings used |
| isartor-6-1-7-t01-fail-a | The 'stream' token is not followed by CR and LF or a single LF |
| isartor-6-1-7-t02-fail-a | The 'endstream' token is not preceeded by EOL |
| isartor-6-1-7-t03-fail-a | The value of Length does not match the number of bytes |
| isartor-6-1-7-t04-fail-a | Stream with F used |
| isartor-6-1-7-t04-fail-b | Stream with F used; Stream with FFilter used |
| isartor-6-1-7-t04-fail-c | Stream with F used; Stream with FFilter used; Stream with FDecodeParms used |
| isartor-6-1-8-t01-fail-a | Object number and generation number not separated by single white-space |
| isartor-6-1-8-t02-fail-a | Generation number and 'obj' not separated by single white-space |
| isartor-6-1-8-t03-fail-a | Object number not preceded by EOL marker |
| isartor-6-1-8-t04-fail-a | 'endobj' not preceded by EOL marker |
| isartor-6-1-8-t05-fail-a | 'obj' not followed by EOL marker |
| isartor-6-1-8-t06-fail-a | 'endobj' not followed by EOL marker |
| isartor-6-1-10-t01-fail-a | LZW compression used for image XObject |
| isartor-6-1-10-t01-fail-b | LZW compression used for inline image |
| isartor-6-1-10-t01-fail-c | LZW compression used in thumbnail |
| isartor-6-1-11-t01-fail-a | EmbeddedFiles shall not be used |
| isartor-6-1-11-t02-fail-a | EmbeddedFiles shall not be used; EF dictionary shall not be used |
| isartor-6-1-12-t01-fail-a | array contains more than 8191 elements |

| test name | expected message |
|---|---|
| isartor-6-1-12-t01-fail-b | name with more than 127 bytes |
| isartor-6-1-12-t01-fail-c | integer value in content stream larger than 2^31-1 |
| isartor-6-1-12-t01-fail-d | integer value in dictionary larger than 2^31-1 |
| isartor-6-1-13-t01-fail-a | Optional content (layers) not allowed |
| isartor-6-2-2-t01-fail-a | Device-specific color space used (DeviceRGB), but no GTS_PDFA1 OutputIntent |
| isartor-6-2-2-t02-fail-a | Output Intent has invalid ICC profile stream |
| isartor-6-2-2-t02-fail-b | output intent uses unsupported ICC profile version |
| isartor-6-2-2-t03-fail-a | Multiple different output intent profiles used |
| isartor-6-2-3-3-t01-fail-a | Device-specific color space used in path (DeviceCMYK), but OutputIntent not CMYK |
| isartor-6-2-3-3-t02-fail-a | Device-specific color space used in path (DeviceRGB), but no OutputIntent |
| isartor-6-2-3-3-t02-fail-b | Device-specific color space used in path (DeviceRGB), but OutputIntent not RGB |
| isartor-6-2-3-3-t02-fail-c | Device-specific color space used in image (DeviceRGB), but no OutputIntent |
| isartor-6-2-3-3-t02-fail-d | Device-specific color space used in image (DeviceRGB), but OutputIntent not RGB |
| isartor-6-2-3-3-t02-fail-e | Device-specific color space used in inline image (DeviceRGB), but no OutputIntent |
| isartor-6-2-3-3-t02-fail-f | Device-specific color space used in pattern (DeviceRGB), but no OutputIntent |
| isartor-6-2-3-3-t02-fail-g | Device-specific color space used in shading (DeviceRGB), but no OutputIntent |
| isartor-6-2-3-3-t02-fail-h | Device-specific color space used in glyph-XObjects of Type3 font d0 (DeviceRGB), but no OutputIntent |
| isartor-6-2-3-3-t02-fail-i | Device-specific color space used in glyph-XObjects of Type3 font d1 (DeviceRGB), but no OutputIntent |
| isartor-6-2-3-3-t02-fail-j | Device-specific color space used in appearance streams of annotationen (DeviceRGB), but no OutputIntent |
| isartor-6-2-3-3-t03-fail-a | Device-specific color space used in path (DeviceCMYK), but no OutputIntent |
| isartor-6-2-3-3-t03-fail-b | Device-specific color space used in path (DeviceCMYK), but OutputIntent not CMYK |
| isartor-6-2-3-3-t03-fail-c | Device-specific color space used in image (DeviceCMYK), but no OutputIntent |
| isartor-6-2-3-3-t03-fail-d | Device-specific color space used in image (DeviceCMYK), but OutputIntent not CMYK |
| isartor-6-2-3-3-t03-fail-e | Device-specific color space used in inline image (DeviceCMYK), but no OutputIntent |
| isartor-6-2-3-3-t04-fail-a | Device-specific color space used in path (DeviceGray), but no OutputIntent |
| isartor-6-2-3-3-t04-fail-b | Device-specific color space used in image (DeviceGray), but no OutputIntent |

| test name | expected message |
|---|---|
| isartor-6-2-3-3-t04-fail-c | Device-specific color space used in inline image (DeviceGray), but no OutputIntent |
| isartor-6-2-3-3-t04-fail-d | Device-specific color space used in path (Default fill color), but no OutputIntent |
| isartor-6-2-3-3-t05-fail-a | Device-specific color space used in image (Indexed DeviceRGB), but no OutputIntent |
| isartor-6-2-3-3-t05-fail-b | Device-specific color space used in inline image (Indexed DeviceRGB), but no OutputIntent |
| isartor-6-2-3-4-t01-fail-a | Device-specific color space used in alternate color space (DeviceN, DeviceCMYK), but no OutputIntent |
| isartor-6-2-3-4-t01-fail-b | Device-specific color space used in alternate color space (Separation, DeviceCMYK), but no OutputIntent |
| isartor-6-2-4-t01-fail-a | Image with alternate image used |
| isartor-6-2-4-t02-fail-a | Image with OPI used |
| isartor-6-2-4-t03-fail-a | Image with interpolation used |
| isartor-6-2-4-t04-fail-a | Image with bad intent used |
| isartor-6-2-5-t01-fail-a | XObject with OPI used |
| isartor-6-2-6-t01-fail-a | Reference XObject used |
| isartor-6-2-7-t01-fail-a | PostScript XObject used |
| isartor-6-2-7-t02-fail-a | PostScript XObject used with Subtype2 |
| isartor-6-2-8-t01-fail-a | Transfer curve (TR array) used |
| isartor-6-2-8-t01-fail-b | Transfer curve (TR function) used |
| isartor-6-2-8-t01-fail-c | Transfer curve (TR Identity) used |
| isartor-6-2-8-t01-fail-d | Transfer curve (TR Default) used |
| isartor-6-2-8-t02-fail-a | Transfer curve (TR2 array) other than Default used |
| isartor-6-2-8-t02-fail-b | Transfer curve (TR2 function) other than Default used |
| isartor-6-2-8-t02-fail-c | Transfer curve (TR2 Identity) other than Default used |
| isartor-6-2-9-t01-fail-a | Undefined rendering intent used |
| isartor-6-2-10-t01-fail-a | Operators not defined in PDF Reference used on page content stream |
| isartor-6-2-10-t01-fail-b | Operators not defined in PDF Reference used on page content stream (with BX/EX) |
| isartor-6-2-10-t01-fail-c | Operators not defined in PDF Reference used on annotation/form field appearance stream |
| isartor-6-3-2-t01-fail-a | embedded TrueType font 'Arial' is damaged |
| isartor-6-3-2-t01-fail-b | embedded PostScript Type 1 font 'LuciduxSans-Oblique' is damaged |
| isartor-6-3-2-t01-fail-c | embedded CID font 'Arial' is damaged |

| test name | expected message |
|---|---|
| isartor-6-3-3-1-t01-fail-a | incompatible CIDSystemInfo entries (different Registry) |
| isartor-6-3-3-1-t01-fail-b | incompatible CIDSystemInfo entries (different Ordering) |
| isartor-6-3-3-2-t01-fail-a | Type 2 CIDFont without CIDToGIDMap |
| isartor-6-3-3-3-t01-fail-a | CMap not embedded |
| isartor-6-3-3-3-t02-fail-a | inconsistent WMode in embedded CMap dict and stream |
| isartor-6-3-4-t01-fail-a | TrueType font 'Arial' not embedded |
| isartor-6-3-4-t01-fail-b | PostScript Type 1 font 'LuciduxSans-Oblique' not embedded |
| isartor-6-3-4-t01-fail-c | CID font 'KozMinPro-Regular-Acro' not embedded |
| isartor-6-3-4-t01-fail-d | Standard Type 1 font 'Helvetica' not embedded |
| isartor-6-3-4-t01-fail-e | font 'Arial' for Form XObject not embedded |
| isartor-6-3-4-t01-fail-f | font 'ZapfDingbats' for field not embedded |
| isartor-6-3-4-t01-fail-g | font 'Helvetica' for Type 3 font glyph not embedded |
| isartor-6-3-4-t01-fail-h | font 'Arial' for tiling pattern not embedded |
| isartor-6-3-5-t01-fail-a | Embedded CIDType0 font program does not define all font glyphs |
| isartor-6-3-5-t01-fail-b | Embedded CIDType2 font program does not define all font glyphs |
| isartor-6-3-5-t01-fail-c | Embedded Type 1 font program does not define all font glyphs |
| isartor-6-3-5-t01-fail-d | Embedded TrueType font program does not define all font glyphs |
| isartor-6-3-5-t02-fail-a | For the Type 1 font subset, the font descriptor dictionary does not include a CharSet string |
| isartor-6-3-5-t03-fail-a | For the CID font subset, the font descriptor dictionary does not include a CIDSet stream |
| isartor-6-3-6-t01-fail-a | widths in embedded PostScript Type 1 font inconsistent with /Widths |
| isartor-6-3-6-t01-fail-b | widths in embedded TrueType font inconsistent with /Widths |
| isartor-6-3-6-t01-fail-c | widths in embedded CID font inconsistent with /Widths |
| isartor-6-3-7-t01-fail-a | non-symbolic TrueType 'Arial' must use MacRoman or WinAnsi encoding |
| isartor-6-3-7-t02-fail-a | symbolic TrueType font 'Wingdings' must not specify encoding |
| isartor-6-3-7-t03-fail-a | symbolic TrueType font does not have exactly one entry in cmap table |
| isartor-6-4-t01-fail-a | Transparency used (ExtGState with soft mask) |
| isartor-6-4-t01-fail-b | Transparency used (Image with soft mask) |
| isartor-6-4-t02-fail-a | Transparency used (Form XObject with transparency group) |
| isartor-6-4-t03-fail-a | Transparency used (Blend mode=multiply) |
| isartor-6-4-t04-fail-a | Transparency used (CA=0.75) |
| isartor-6-4-t05-fail-a | Transparency used (ca=0.75) |

| test name | expected message |
|---|---|
| isartor-6-5-2-t01-fail-a | Prohibited annotation type '3D' |
| isartor-6-5-2-t01-fail-b | Prohibited annotation type 'Caret' |
| isartor-6-5-2-t01-fail-c | Prohibited annotation type 'custom annotation' |
| isartor-6-5-2-t01-fail-d | Prohibited annotation type 'Watermark' |
| isartor-6-5-2-t01-fail-e | Prohibited annotation type 'Polygon' |
| isartor-6-5-2-t01-fail-f | Prohibited annotation type 'PolyLine' |
| isartor-6-5-2-t01-fail-g | Prohibited annotation type 'Screen' |
| isartor-6-5-2-t01-fail-h | Prohibited annotation type 'Redact' |
| isartor-6-5-2-t02-fail-a | Prohibited annotation type 'FileAttachment' |
| isartor-6-5-2-t02-fail-b | Prohibited annotation type 'Movie' |
| isartor-6-5-2-t02-fail-c | Prohibited annotation type 'Sound' |
| isartor-6-5-3-t01-fail-a | CA entry has value other than 1.0 |
| isartor-6-5-3-t02-fail-a | F key missing |
| isartor-6-5-3-t02-fail-b | F has Print flag not set |
| isartor-6-5-3-t02-fail-c | F entry has Hidden flag set |
| isartor-6-5-3-t02-fail-d | F entry has Invisible flag  set |
| isartor-6-5-3-t02-fail-e | F entry has NoView flag set |
| isartor-6-5-3-t03-fail-a | C entry present but no OutputIntent present |
| isartor-6-5-3-t03-fail-b | C entry present but OutputIntent has non-RGB destination profile |
| isartor-6-5-3-t03-fail-c | IC entry present but no OutputIntent present |
| isartor-6-5-3-t03-fail-d | IC entry present and OutputIntent has non-RGB destination profile |
| isartor-6-5-3-t04-fail-a | AP has entries other than the N entry |
| isartor-6-5-3-t04-fail-b | AP has entries but no N entry |
| isartor-6-5-3-t04-fail-c | AP has no N entry |
| isartor-6-5-3-t04-fail-d | AP has an N entry whose value is not a stream |
| isartor-6-6-1-t01-fail-a | Launch action not allowed in annotation |
| isartor-6-6-1-t01-fail-b | Sound action not allowed in annotation |
| isartor-6-6-1-t01-fail-c | Movie action not allowed in annotation |
| isartor-6-6-1-t01-fail-d | ResetForm action not allowed in annotation |
| isartor-6-6-1-t01-fail-e | ImportData action not allowed in annotation |
| isartor-6-6-1-t01-fail-f | JavaScript action not allowed in annotation |
| isartor-6-6-1-t01-fail-g | SetState action not allowed in annotation |

| test name | expected message |
|---|---|
| isartor-6-6-1-t01-fail-h | NOP action not allowed in annotation |
| isartor-6-6-1-t01-fail-i | named action other than predefined not allowed in annotation |
| isartor-6-6-1-t02-fail-a | Launch action not allowed in bookmark |
| isartor-6-6-1-t02-fail-b | Sound action not allowed in bookmark |
| isartor-6-6-1-t02-fail-c | Movie action not allowed in bookmark |
| isartor-6-6-1-t02-fail-d | ResetForm action not allowed in bookmark |
| isartor-6-6-1-t02-fail-e | ImportData action not allowed in bookmark |
| isartor-6-6-1-t02-fail-f | JavaScript action not allowed in bookmark |
| isartor-6-6-1-t02-fail-g | SetState action not allowed in bookmark |
| isartor-6-6-1-t02-fail-h | NOP action not allowed in bookmark |
| isartor-6-6-1-t02-fail-i | named action other than predefined not allowed in bookmark |
| isartor-6-6-1-t03-fail-a | Launch action not allowed in catalog |
| isartor-6-6-1-t03-fail-b | Sound action not allowed in catalog |
| isartor-6-6-1-t03-fail-c | Movie action not allowed in catalog |
| isartor-6-6-1-t03-fail-d | ResetForm action not allowed in catalog |
| isartor-6-6-1-t03-fail-e | ImportData action not allowed in catalog |
| isartor-6-6-1-t03-fail-f | JavaScript action not allowed in catalog |
| isartor-6-6-1-t03-fail-g | SetState action not allowed in catalog |
| isartor-6-6-1-t03-fail-h | NOP action not allowed in catalog |
| isartor-6-6-1-t03-fail-i | named action other than predefined not allowed in catalog |
| isartor-6-6-1-t04-fail-a | Launch action not allowed for page |
| isartor-6-6-1-t04-fail-b | Sound action not allowed for page |
| isartor-6-6-1-t04-fail-c | Movie action not allowed for page |
| isartor-6-6-1-t04-fail-d | ResetForm action not allowed for page |
| isartor-6-6-1-t04-fail-e | ImportData action not allowed for page |
| isartor-6-6-1-t04-fail-f | JavaScript action not allowed for page |
| isartor-6-6-1-t04-fail-g | SetState action not allowed for page |
| isartor-6-6-1-t04-fail-h | NOP action not allowed for page |
| isartor-6-6-1-t04-fail-i | named action other than predefined not allowed for page |
| isartor-6-6-2-t01-fail-a | catalog must not contain AA action |
| isartor-6-7-2-t01-fail-a | Metadata key missing in catalog |
| isartor-6-7-2-t02-fail-a | invalid XMP metadata |

| test name | expected message |
|---|---|
| isartor-6-7-2-t02-fail-b | unknown property 'xmp:Title' in predefined schema |
| isartor-6-7-2-t02-fail-c | wrong value type for predefined property 'dc:description' |
| isartor-6-7-2-t03-fail-a | metadata dictionary uses stream filter |
| isartor-6-7-3-t01-fail-a | document information entry 'Title' not synchronized with XMP |
| isartor-6-7-3-t01-fail-b | document information entry 'Subject' not synchronized with XMP |
| isartor-6-7-3-t01-fail-c | document information entry 'CreationDate' not synchronized with XMP |
| isartor-6-7-5-t01-fail-a | 'bytes' attribute not allowed in XMP metadata |
| isartor-6-7-5-t02-fail-a | 'encoding' attribute not allowed in XMP metadata |
| isartor-6-7-8-t01-fail-a | extension schema doesn't have description embedded |
| isartor-6-7-8-t02-fail-a | wrong namespace prefix for extension schema container schema |
| isartor-6-7-8-t02-fail-b | wrong namespace URI for 'pdfaSchema' value type |
| isartor-6-7-8-t02-fail-c | wrong value type for 'pdfaExtension:schemas' |
| isartor-6-7-8-t02-fail-d | pdfaSchema:property missing in extension schema description |
| isartor-6-7-8-t02-fail-e | required property 'valueType' missing in PDF/A Schema Value Type |
| isartor-6-7-8-t02-fail-f | required property 'description' missing in PDF/A Property Value Type |
| isartor-6-7-8-t02-fail-g | description of custom value type 'mailaddress' missing in PDF/A ValueType |
| isartor-6-7-8-t02-fail-h | required property 'namespaceURI' missing in PDF/A Property Value Type |
| isartor-6-7-8-t02-fail-i | required property 'valueType' missing in PDF/A Field Value Type |
| isartor-6-7-8-t02-fail-j | description of custom value type 'CT' missing in PDF/A Field Value Type |
| isartor-6-7-8-t02-fail-k | custom type with fields is used with simple value type |
| isartor-6-7-9-t01-fail-a | malformed XMP document metadata |
| isartor-6-7-11-t01-fail-a | missing PDF/A identifier |
| isartor-6-7-11-t01-fail-b | invalid PDF/A identifier namespace |
| isartor-6-7-11-t01-fail-c | invalid PDF/A conformance level |
| isartor-6-7-11-t01-fail-d | invalid PDF/A part number |
| isartor-6-9-t01-fail-a | NeedAppearances entry for form fields must be false |
| isartor-6-9-t02-fail-a | form field must not contain /A actions |
| isartor-6-9-t02-fail-b | form field must not contain /AA actions |