Apache™ FOP Compliance Page

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1 W3C XSL-FO 1.1 Standard

One of Apache™ FOP's design goals is conformance to the W3C XSL-FO 1.1 standard, which specifies three levels of "conformance": basic, extended, and complete. Although FOP does not currently conform to any of these levels, it is nevertheless a useful work-in-progress for many applications. The information presented here demonstrates FOP's progress toward the goal of conformance, which progress consists of implementation of specific objects and properties in the standard. The information presented is useful not only to the developers as a sort of "to do" list, but also for setting proper expectations for users and potential users.

The following table shows the legend used for the tables below:

yes	indicates conformance
partial	indicates partial conformance
no	indicates a lack of conformance
na	indicates that the item is "not applicable" to FOP usually because FOP supports only visual media

1.1 XSL-FO Object Support

- **Declarations and Pagination and Layout Formatting Objects:** root, declarations, color-profile, page-sequence, page-sequence-wrapper, layout-master-set, page-sequence-master, single-page-master-reference, repeatable-page-master-reference, repeatable-page-master-alternatives, conditional-page-master-reference, simple-page-master, region-body, region-before, region-after, region-start, region-end, flow, static-content, title, flow-map, flow-assignment, flow-source-list, flow-name-specifier, flow-target-list, region-name-specifier
- **Block Formatting Objects:** block, block-container
- **Inline Formatting Objects:** bidi-override, character, initial-property-set, external-graphic, instream-foreign-object, inline, inline-container, leader, page-number, page-number-citation, page-number-citation-last, folio-prefix, folio-suffix, scaling-value-citation
- **Table Formatting Objects:** table-and-caption, table, table-column, table-caption, table-header, table-footer, table-body, table-row, table-cell
- **List Formatting Objects:** list-block, list-item, list-item-body, list-item-label
- **Link and Multi Formatting Objects:** basic-link, multi-switch, multi-case, multi-toggle, multi-properties, multi-property-set
- **Formatting Objects for Indexing:** index-page-number-prefix, index-page-number-suffix, index-range-begin, index-range-end, index-key-reference, index-page-citation-list, index-page-citation-list-separator, index-page-citation-range-separator
- **Formatting Objects for Bookmarks:** bookmark-tree, bookmark, bookmark-title
- **Out-of-line Formatting Objects:** float, footnote, footnote-body
- **Other Formatting Objects:** change-bar-begin, change-bar-end, wrapper, marker, retrieve-marker, retrieve-table-marker

1.2 XSL-FO Property Support

- **Common Accessibility Properties:** source-document, role
- **Common Absolute Position Properties:** absolute-position, top, right, bottom, left
- **Common Aural Properties:** azimuth, cue-after, cue-before, elevation, pause-after, pause-before, pitch, pitch-range, play-during, richness, speak, speak-header, speak-numeral, speak-punctuation, speech-rate, stress, voice-family, volume
- **Common Border, Padding, and Background Properties:** background-attachment, background-color, background-image, background-repeat, background-position-horizontal, background-position-vertical, border-before-color, border-before-style, border-before-width, border-after-color, border-after-style, border-after-width, border-start-color, border-start-style, border-start-width, border-end-color, border-end-style, border-end-width, border-top-color, border-top-style, border-top-width, border-bottom-color, border-bottom-style, border-bottom-width, border-left-color, border-left-style, border-left-width, border-right-color, border-right-style, border-right-width, padding-before, padding-after, padding-start, padding-end, padding-top, padding-bottom, padding-left, padding-right
- **Common Font Properties:** font-family, font-selection-strategy, font-size, font-stretch, font-size-adjust, font-style, font-variant, font-weight
- **Common Hyphenation Properties:** country, language, script, hyphenate, hyphenation-character, hyphenation-push-character-count, hyphenation-remain-character-count
- **Common Margin Properties - Block:** margin-top, margin-bottom, margin-left, margin-right, space-before, space-after, start-indent, end-indent
- **Common Margin Properties - Inline:** margin-top, margin-bottom, margin-left, margin-right, space-end, space-start
- **Common Relative Position Properties:** top, right, bottom, left, relative-position
- **Area Alignment Properties:** alignment-adjust, alignment-baseline, baseline-shift, display-align, dominant-baseline, relative-align
- **Area Dimension Properties:** allowed-height-scale, allowed-width-scale, block-progression-dimension, content-height, content-width, height, inline-progression-dimension, max-height, max-width, min-height, min-width, scaling, scaling-method, width
- **Block and Line-related Properties:** hyphenation-keep, hyphenation-ladder-count, last-line-end-indent, line-height, line-height-shift-adjustment, line-stacking-strategy, linefeed-treatment, white-space-treatment, text-align, text-align-last, text-indent, white-space-collapse, wrap-option
- **Character Properties:** character, letter-spacing, suppress-at-line-break, text-decoration, text-shadow, text-transform, treat-as-word-space, word-spacing
- **Color-related Properties:** color, color-profile-name, rendering-intent
- **Float-related Properties:** clear, float, intrusion-displace
- **Keeps and Breaks Properties:** break-after, break-before, keep-together, keep-with-next, keep-with-previous, orphans, widows
- **Layout-related Properties:** clip, overflow, reference-orientation, span
- **Leader and Rule Properties:** leader-alignment, leader-pattern, leader-pattern-width, leader-length, rule-style, rule-thickness
- **Properties for Dynamic Effects Formatting Objects:** active-state, auto-restore, case-name, case-title, destination-placement-offset, external-destination, indicate-destination, internal-destination, show-destination, starting-state, switch-to, target-presentation-context, target-processing-context, target-stylesheet

- **Properties for Indexing:** index-class, index-key, page-number-treatment, merge-ranges-across-index-key-references, merge-sequential-page-numbers, merge-pages-across-index-key-references, ref-index-key
- **Properties for Markers:** marker-class-name, retrieve-boundary-within-table, retrieve-class-name, retrieve-position, retrieve-boundary, retrieve-position-within-table
- **Properties for Number to String Conversion:** format, grouping-separator, grouping-size, letter-value
- **Pagination and Layout Properties:** blank-or-not-blank, column-count, column-gap, extent, flow-name, force-page-count, initial-page-number, master-name, master-reference, maximum-repeats, media-usage, odd-or-even, page-height, page-position, page-width, precedence, region-name, flow-map-name, flow-map-reference, flow-name-reference, region-name-reference
- **Table Properties:** border-after-precedence, border-before-precedence, border-collapse, border-end-precedence, border-separation, border-start-precedence, caption-side, column-number, column-width, empty-cells, ends-row, number-columns-repeated, number-columns-spanned, number-rows-spanned, starts-row, table-layout, table-omit-footer-at-break, table-omit-header-at-break
- **Writing-mode-related Properties:** direction, glyph-orientation-horizontal, glyph-orientation-vertical, text-altitude, text-depth, unicode-bidi, writing-mode
- **Miscellaneous Properties:** change-bar-class, change-bar-color, change-bar-offset, change-bar-placement, change-bar-style, change-bar-width, content-type, id, intrinsic-scale-value, page-citation-strategy, provisional-label-separation, provisional-distance-between-starts, ref-id, scale-option, score-spaces, src, visibility, z-index
- **Shorthand Properties:** background, background-position, border, border-bottom, border-color, border-left, border-right, border-style, border-spacing, border-top, border-width, cue, font, margin, padding, page-break-after, page-break-before, page-break-inside, pause, position, size, vertical-align, white-space, xml:lang

1.3 XSL-FO Core Function Library Support

- **Number Functions:** floor, ceiling, round, min, max, abs
- **Color Functions:** rgb, rgb-icc, system-color
- **Font Functions:** system-font
- **Property Value Functions:** inherited-property-value, label-end, body-start, from-parent, from-nearest-specified-value, from-page-master-region, from-table-column, proportional-column-width, merge-property-values

2 XSL-FO Object Support Table (§6)

The following is a summary of FOP's current support for the standard XSL-FO objects.

Citation	Object Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	development	
§6.4	Declarations and Pagination and Layout Formatting Objects					
§6.4.2	root	Basic	yes	yes	yes	

Citation	Object Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	development	
§6.4.3	declarations	Basic	yes	yes	yes	
§6.4.4	color-profile	Extended	yes	yes	yes	
§6.4.5	page-sequence	Basic	yes	yes	yes	
§6.4.6	page-sequence-wrapper	Basic	no	no	no	
§6.4.7	layout-master-set	Basic	yes	yes	yes	
§6.4.8	page-sequence-master	Basic	yes	yes	yes	
§6.4.9	single-page-master-reference	Basic	yes	yes	yes	
§6.4.10	repeatable-page-master-reference	Basic	yes	yes	yes	
§6.4.11	repeatable-page-master-alternatives	Extended	yes	yes	yes	
§6.4.12	conditional-page-master-reference	Extended	yes	yes	yes	
§6.4.13	simple-page-master	Basic	partial	partial	partial	The page width may not change among pages of the same page-sequence unless a forced break is inserted.
§6.4.14	region-body	Basic	yes	yes	yes	
§6.4.15	region-before	Extended	yes	yes	yes	
§6.4.16	region-after	Extended	yes	yes	yes	
§6.4.17	region-start	Extended	yes	yes	yes	
§6.4.18	region-end	Extended	yes	yes	yes	
§6.4.19	flow	Basic	yes	yes	yes	
§6.4.20	static-content	Extended	yes	yes	yes	

Citation	Object Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	development	
§6.4.21	title	Extended	yes	yes	yes	
§6.4.22	flow-map	Extended	no	no	no	
§6.4.23	flow-assignment	Extended	no	no	no	
§6.4.24	flow-source-list	Extended	no	no	no	
§6.4.25	flow-name-specifier	Extended	no	no	no	
§6.4.26	flow-target-list	Extended	no	no	no	
§6.4.27	region-name-specifier	Extended	no	no	no	
§6.5	Block Formatting Objects					
§6.5.2	block	Basic	yes	yes	yes	
§6.5.3	block-container	Extended	partial	partial	partial	
§6.6	Inline Formatting Objects					
§6.6.2	bidi-override	Extended	no	yes	yes	
§6.6.3	character	Basic	yes	yes	yes	
§6.6.4	initial-property-set	Extended	no	no	no	
§6.6.5	external-graphic	Basic	yes	yes	yes	
§6.6.6	instream-foreign-object	Extended	yes	yes	yes	Built-in support for SVG only, additional namespaces through optional extensions.
§6.6.7	inline	Basic	yes	yes	yes	
§6.6.8	inline-container	Extended	no	no	no	
§6.6.9	leader	Basic	yes	yes	yes	
§6.6.10	page-number	Basic	yes	yes	yes	

Citation	Object Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	development	
§6.6.11	page-number-citation	Extended	partial	partial	partial	After the page number is known, no relayout is performed. The appearance may be suboptimal depending on the use case.
§6.6.12	page-number-citation-last	Extended	partial	partial	partial	• Works only for page-sequence so far. • After the page number is known, no relayout is performed. The appearance may be suboptimal depending on the use case.
§6.6.13	folio-prefix	Extended	no	no	no	
§6.6.14	folio-suffix	Extended	no	no	no	
§6.6.15	scaling-value-citation	Extended	no	no	no	
§6.7	Table Formatting Objects					
§6.7.2	table-and-caption	Basic	no	no	no	
§6.7.3	table	Basic	partial	partial	partial	No support for auto layout yet
§6.7.4	table-column	Basic	yes	yes	yes	
§6.7.5	table-caption	Extended	no	no	no	
§6.7.6	table-header	Basic	yes	yes	yes	
§6.7.7	table-footer	Extended	yes	yes	yes	

Citation	Object Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	development	
§6.7.8	table-body	Basic	yes	yes	yes	
§6.7.9	table-row	Basic	yes	yes	yes	
§6.7.10	table-cell	Basic	yes	yes	yes	
§6.8	List Formatting Objects					
§6.8.2	list-block	Basic	yes	yes	yes	
§6.8.3	list-item	Basic	yes	yes	yes	
§6.8.4	list-item-body	Basic	yes	yes	yes	
§6.8.5	list-item-label	Extended	yes	yes	yes	
§6.9	Link and Multi Formatting Objects					
§6.9.2	basic-link	Extended	yes	yes	yes	both internal and external supported
§6.9.3	multi-switch	Extended	no	no	no	
§6.9.4	multi-case	Basic	no	no	no	
§6.9.5	multi-toggle	Extended	no	no	no	
§6.9.6	multi-properties	Extended	no	no	no	
§6.9.7	multi-property-set	Extended	no	no	no	
§6.10	Formatting Objects for Indexing					
§6.10.2	index-page-number-prefix	Extended	no	no	no	
§6.10.3	index-page-number-suffix	Extended	no	no	no	
§6.10.4	index-range-begin	Extended	no	no	no	
§6.10.5	index-range-end	Extended	no	no	no	
§6.10.6	index-key-reference	Extended	no	no	no	
§6.10.7	index-page-citation-list	Extended	no	no	no	

Citation	Object Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	development	
§6.10.8	index-page-citation-list-separator	Extended	no	no	no	
§6.10.9	index-page-citation-range-separator	Extended	no	no	no	
§6.11	Formatting Objects for Bookmarks					
§6.11.1	bookmark-tree	Extended	yes	yes	yes	
§6.11.2	bookmark	Extended	partial	partial	partial	external-destination is not yet supported.
§6.11.3	bookmark-title	Extended	partial	partial	partial	color, font-style and font-weight are not supported, yet.
§6.12	Out-of-line Formatting Objects					
§6.12.2	float	Extended	no	no	no	
§6.12.3	footnote	Extended	partial	partial	partial	Restrictions with multi-column documents.
§6.12.4	footnote-body	Extended	yes	yes	yes	
§6.13	Other Formatting Objects					
§6.13.2	change-bar-begin	Extended	no	no	no	
§6.13.3	change-bar-end	Extended	no	no	no	
§6.13.4	wrapper	Basic	yes	yes	yes	Only works as expected with inline-level content.
§6.13.5	marker	Extended	yes	yes	yes	
§6.13.6	retrieve-marker	Extended	yes	yes	yes	
§6.13.7	retrieve-table-marker	Extended	no	no	no	

3 XSL-FO Property Support Table (§7)

The following is a summary of FOP's current support for the standard XSL-FO properties.

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.5	Common Accessibility Properties					
§7.5.1	source-document	Basic	no	no	no	
§7.5.2	role	Basic	no	no	no	
§7.6	Common Absolute Position Properties					
§7.6.1	absolute-position	Complete	yes	yes	yes	
§7.6.2	top	Extended	yes	yes	yes	
§7.6.3	right	Extended	yes	yes	yes	
§7.6.4	bottom	Extended	yes	yes	yes	
§7.6.5	left	Extended	yes	yes	yes	
§7.7	Common Aural Properties					
§7.7.1	azimuth	Basic	na	na	na	
§7.7.2	cue-after	Basic	na	na	na	
§7.7.3	cue-before	Basic	na	na	na	
§7.7.4	elevation	Basic	na	na	na	
§7.7.5	pause-after	Basic	na	na	na	
§7.7.6	pause-before	Basic	na	na	na	
§7.7.7	pitch	Basic	na	na	na	
§7.7.8	pitch-range	Basic	na	na	na	
§7.7.9	play-during	Basic	na	na	na	
§7.7.10	richness	Basic	na	na	na	
§7.7.11	speak	Basic	na	na	na	
§7.7.12	speak-header	Basic	na	na	na	
§7.7.13	speak-numeral	Basic	na	na	na	
§7.7.14	speak-punctuation	Basic	na	na	na	

| Citation | Property Name | XSL-FO Conformance Level | Support in FOP | | | Comments |
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.7.15	speech-rate	Basic	na	na	na	
§7.7.16	stress	Basic	na	na	na	
§7.7.17	voice-family	Basic	na	na	na	
§7.7.18	volume	Basic	na	na	na	
§7.8	Common Border, Padding, and Background Properties					
§7.8.1	background-attachment	Extended	no	no	no	
§7.8.2	background-color	Basic	yes	yes	yes	
§7.8.3	background-image	Extended	yes	yes	yes	
§7.8.4	background-repeat	Extended	yes	yes	yes	
§7.8.5	background-position-horizontal	Extended	partial	partial	partial	Ignored when background-repeat set to "repeat" or "repeat-x"
§7.8.6	background-position-vertical	Extended	partial	partial	partial	Ignored when background-repeat set to "repeat" or "repeat-y"
§7.8.7	border-before-color	Basic	yes	yes	yes	
§7.8.8	border-before-style	Basic	yes	yes	yes	
§7.8.9	border-before-width	Basic	yes	yes	yes	
§7.8.10	border-after-color	Basic	yes	yes	yes	
§7.8.11	border-after-style	Basic	yes	yes	yes	
§7.8.12	border-after-width	Basic	yes	yes	yes	

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.8.13	border-start-color	Basic	yes	yes	yes	
§7.8.14	border-start-style	Basic	yes	yes	yes	
§7.8.15	border-start-width	Basic	yes	yes	yes	
§7.8.16	border-end-color	Basic	yes	yes	yes	
§7.8.17	border-end-style	Basic	yes	yes	yes	
§7.8.18	border-end-width	Basic	yes	yes	yes	
§7.8.19	border-top-color	Basic	yes	yes	yes	
§7.8.20	border-top-style	Basic	yes	yes	yes	
§7.8.21	border-top-width	Basic	yes	yes	yes	
§7.8.22	border-bottom-color	Basic	yes	yes	yes	
§7.8.23	border-bottom-style	Basic	yes	yes	yes	
§7.8.24	border-bottom-width	Basic	yes	yes	yes	
§7.8.25	border-left-color	Basic	yes	yes	yes	
§7.8.26	border-left-style	Basic	yes	yes	yes	
§7.8.27	border-left-width	Basic	yes	yes	yes	
§7.8.28	border-right-color	Basic	yes	yes	yes	
§7.8.29	border-right-style	Basic	yes	yes	yes	
§7.8.30	border-right-width	Basic	yes	yes	yes	

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.8.31	padding-before	Basic	yes	yes	yes	
§7.8.32	padding-after	Basic	yes	yes	yes	
§7.8.33	padding-start	Basic	yes	yes	yes	
§7.8.34	padding-end	Basic	yes	yes	yes	
§7.8.35	padding-top	Basic	yes	yes	yes	
§7.8.36	padding-bottom	Basic	yes	yes	yes	
§7.8.37	padding-left	Basic	yes	yes	yes	
§7.8.38	padding-right	Basic	yes	yes	yes	
§7.9	Common Font Properties					
§7.9.2	font-family	Basic	partial	partial	partial	font-family lists are allowed but glyph based font selection is not supported
§7.9.3	font-selection-strategy	Complete	no	no	no	
§7.9.4	font-size	Basic	yes	yes	yes	
§7.9.5	font-stretch	Extended	no	no	no	
§7.9.6	font-size-adjust	Extended	no	no	no	
§7.9.7	font-style	Basic	yes	yes	yes	
§7.9.8	font-variant	Basic	no	no	no	
§7.9.9	font-weight	Basic	partial	partial	partial	TODO <relative> font weights
§7.10	Common Hyphenation Properties					
§7.10.1	country	Extended	yes	yes	yes	For PDF output: Only 2-letter codes from ISO 3166 are supported properly to identify the natural language!

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.10.2	language	Extended	yes	yes	yes	For PDF output: Only 2-letter codes from ISO 639 are supported properly to identify the natural language! Also used with complex scripts features.
§7.10.3	script	Extended	no	yes	yes	Used with complex scripts features to override default script heuristics.
§7.10.4	hyphenate	Extended	yes	yes	yes	
§7.10.5	hyphenation-character	Extended	yes	yes	yes	
§7.10.6	hyphenation-push-character-count	Extended	yes	yes	yes	
§7.10.7	hyphenation-remain-character-count	Extended	yes	yes	yes	
§7.11	Common Margin Properties - Block					
§7.11.1	margin-top	Basic	yes	yes	yes	
§7.11.2	margin-bottom	Basic	yes	yes	yes	
§7.11.3	margin-left	Basic	yes	yes	yes	
§7.11.4	margin-right	Basic	yes	yes	yes	
§7.11.5	space-before	Basic	partial	partial	partial	Space adjustment may not fully work everywhere, yet.
§7.11.6	space-after	Basic	partial	partial	partial	Space adjustment may not fully work

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
						everywhere, yet.
§7.11.7	start-indent	Basic	yes	yes	yes	
§7.11.8	end-indent	Basic	yes	yes	yes	
§7.12	Common Margin Properties - Inline					
§7.12.1	margin-top	Basic	no	no	no	
§7.12.2	margin-bottom	Basic	no	no	no	
§7.12.3	margin-left	Basic	no	no	no	
§7.12.4	margin-right	Basic	no	no	no	
§7.12.5	space-end	Basic	no	no	no	
§7.12.6	space-start	Basic	no	no	no	
§7.13	Common Relative Position Properties					
§7.13.1	top	Extended	no	no	no	
§7.13.2	right	Extended	no	no	no	
§7.13.3	bottom	Extended	no	no	no	
§7.13.4	left	Extended	no	no	no	
§7.13.5	relative-position	Extended	no	no	no	
§7.14	Area Alignment Properties					
§7.14.1	alignment-adjust	Basic	yes	yes	yes	
§7.14.2	alignment-baseline	Basic	yes	yes	yes	
§7.14.3	baseline-shift	Basic	yes	yes	yes	
§7.14.4	display-align	Extended	partial	partial	partial	TODO Check e-g, i-f-o.
§7.14.5	dominant-baseline	Basic	yes	yes	yes	
§7.14.6	relative-align	Extended	no	no	no	
§7.15	Area Dimension Properties					

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.15.1	allowed-height-scale	Extended	no	no	no	
§7.15.2	allowed-width-scale	Extended	no	no	no	
§7.15.3	block-progression-dimension	Basic	yes	yes	yes	
§7.15.4	content-height	Extended	yes	yes	yes	
§7.15.5	content-width	Extended	yes	yes	yes	
§7.15.6	height	Basic	yes	yes	yes	
§7.15.7	inline-progression-dimension	Basic	yes	yes	yes	
§7.15.8	max-height	Complete	yes	yes	yes	
§7.15.9	max-width	Complete	yes	yes	yes	
§7.15.10	min-height	Complete	yes	yes	yes	
§7.15.11	min-width	Complete	yes	yes	yes	
§7.15.12	scaling	Extended	yes	yes	yes	
§7.15.13	scaling-method	Extended	no	no	no	
§7.15.14	width	Basic	yes	yes	yes	
§7.16	Block and Line-related Properties					
§7.16.1	hyphenation-keep	Extended	no	no	no	
§7.16.2	hyphenation-ladder-count	Extended	yes	yes	yes	
§7.16.3	last-line-end-indent	Extended	yes	yes	yes	
§7.16.4	line-height	Basic	yes	yes	yes	
§7.16.5	line-height-shift-adjustment	Extended	yes	yes	yes	
§7.16.6	line-stacking-strategy	Basic	partial	partial	partial	value "line-height" not supported

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.16.7	linefeed-treatment	Extended	yes	yes	yes	
§7.16.8	white-space-treatment	Extended	partial	partial	partial	inline elements may interfere with correct handling of this property in some cases
§7.16.9	text-align	Basic	partial	partial	partial	Only start, end, center and justify are supported
§7.16.10	text-align-last	Extended	partial	partial	partial	Only start, end, center and justify are supported
§7.16.11	text-indent	Basic	yes	yes	yes	
§7.16.12	white-space-collapse	Extended	yes	yes	yes	
§7.16.13	wrap-option	Basic	partial	partial	partial	Only supported on fo:block.
§7.17	Character Properties					
§7.17.1	character	Basic	yes	yes	yes	
§7.17.2	letter-spacing	Extended	yes	yes	yes	
§7.17.3	suppress-at-line-break	Extended	no	no	no	
§7.17.4	text-decoration	Extended	yes	yes	yes	
§7.17.5	text-shadow	Extended	no	no	no	
§7.17.6	text-transform	Extended	yes	yes	yes	
§7.17.7	treat-as-word-space	Extended	no	no	no	
§7.17.8	word-spacing	Extended	yes	yes	yes	
§7.18	Color-related Properties					
§7.18.1	color	Basic	yes	yes	yes	
§7.18.2	color-profile-name	Extended	no	no	no	

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.18.3	rendering-intent	Extended	no	no	no	
§7.19	Float-related Properties					
§7.19.1	clear	Extended	no	no	no	
§7.19.2	float	Extended	no	no	no	
§7.19.3	intrusion-displace	Extended	no	no	no	
§7.20	Keeps and Breaks Properties					
§7.20.1	break-after	Basic	yes	yes	yes	
§7.20.2	break-before	Basic	yes	yes	yes	
§7.20.3	keep-together	Extended	partial	partial	partial	• [1.0 and later] minimal support for <integer> value.
§7.20.4	keep-with-next	Basic	partial	partial	partial	• works on all implemented block-level FOs, but not on inline-level FOs. • [1.0 and later] minimal support for <integer> value.
§7.20.5	keep-with-previous	Basic	partial	partial	partial	• [1.0 and later] works on all implemented block-level FOs, but not on inline-level FOs. • [1.0 and later]

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
						minimal support for <integer> value.
§7.20.6	orphans	Basic	yes	yes	yes	
§7.20.7	widows	Basic	yes	yes	yes	
§7.21	Layout-related Properties					
§7.21.1	clip	Extended	no	no	no	
§7.21.2	overflow	Basic	yes	yes	yes	
§7.21.3	reference-orientation	Extended	yes	yes	yes	
§7.21.4	span	Extended	yes	yes	yes	
§7.22	Leader and Rule Properties					
§7.22.1	leader-alignment	Extended	no	no	no	Not supported
§7.22.2	leader-pattern	Basic	yes	yes	yes	Value "use-content" does not work in all circumstances.
§7.22.3	leader-pattern-width	Extended	yes	yes	yes	
§7.22.4	leader-length	Basic	yes	yes	yes	
§7.22.5	rule-style	Basic	yes	yes	yes	
§7.22.6	rule-thickness	Basic	yes	yes	yes	
§7.23	Properties for Dynamic Effects Formatting Objects					
§7.23.1	active-state	Extended	no	no	no	
§7.23.2	auto-restore	Extended	no	no	no	
§7.23.3	case-name	Extended	no	no	no	
§7.23.4	case-title	Extended	no	no	no	
§7.23.5	destination-placement-offset	Extended	no	no	no	
§7.23.6	external-destination	Extended	yes	yes	yes	

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.23.7	indicate-destination	Extended	no	no	no	
§7.23.8	internal-destination	Extended	yes	yes	yes	
§7.23.9	show-destination	Extended	partial	partial	partial	[1.0 and later] only has effect in PDF output, for external PDF destinations (links pointing to destinations in *another* PDF), and only works reliably when the PDF is viewed in a standalone PDF viewer. Adobe's browser plugin, for example, ignores the / NewWindow flag.
§7.23.10	starting-state	Extended	partial	partial	partial	support for starting-state on fo:bookmark
§7.23.11	switch-to	Extended	no	no	no	
§7.23.12	target-presentation-context	Extended	no	no	no	
§7.23.13	target-processing-context	Extended	no	no	no	
§7.23.14	target-stylesheet	Extended	no	no	no	
§7.24	Properties for Indexing					
§7.24.1	index-class	Extended	no	no	no	
§7.24.2	index-key	Extended	no	no	no	

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.24.3	page-number-treatment	Extended	no	no	no	
§7.24.4	merge-ranges-across-index-key-references	Extended	no	no	no	
§7.24.5	merge-sequential-page-numbers	Extended	no	no	no	
§7.24.6	merge-pages-across-index-key-references	Extended	no	no	no	
§7.24.7	ref-index-key	Extended	no	no	no	
§7.25	Properties for Markers					
§7.25.1	marker-class-name	Extended	yes	yes	yes	
§7.25.2	retrieve-boundary-within-table	Extended	no	no	no	
§7.25.3	retrieve-class-name	Extended	yes	yes	yes	
§7.53.4	retrieve-position	Extended	yes	yes	yes	
§7.25.5	retrieve-boundary	Extended	yes	yes	yes	
§7.25.6	retrieve-position-within-table	Extended	no	no	no	
§7.26	Properties for Number to String Conversion					
§7.26.1	format	Basic	partial	yes	yes	[1.0 and earlier] only values '0*1', 'a', 'A', 'i', 'I' supported
§7.26.2	grouping-separator	Extended	no	yes	yes	
§7.26.3	grouping-size	Extended	no	yes	yes	
§7.26.4	letter-value	Basic	no	yes	yes	

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.27	Pagination and Layout Properties					
§7.27.1	blank-or-not-blank	Extended	yes	yes	yes	
§7.27.2	column-count	Extended	yes	yes	yes	
§7.27.3	column-gap	Extended	yes	yes	yes	
§7.27.4	extent	Extended	yes	yes	yes	
§7.27.5	flow-name	Basic	yes	yes	yes	
§7.27.6	force-page-count	Extended	yes	yes	yes	
§7.27.7	initial-page-number	Basic	yes	yes	yes	
§7.27.8	master-name	Basic	yes	yes	yes	
§7.27.9	master-reference	Basic	yes	yes	yes	
§7.27.10	maximum-repeats	Extended	yes	yes	yes	
§7.27.11	media-usage	Extended	no	no	no	
§7.27.12	odd-or-even	Extended	yes	yes	yes	
§7.27.13	page-height	Basic	partial	partial	partial	value "indefinite" not yet supported
§7.27.14	page-position	Extended	yes	yes	yes	value "only" not supported
§7.27.15	page-width	Basic	partial	partial	partial	value "indefinite" not yet supported
§7.27.16	precedence	Extended	yes	yes	yes	
§7.27.17	region-name	Basic	yes	yes	yes	
§7.27.18	flow-map-name	Extended	no	no	no	
§7.27.19	flow-map-reference	Extended	no	no	no	
§7.27.20	flow-name-reference	Extended	no	no	no	

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.27.21	region-name-reference	Extended	no	no	no	
§7.28	Table Properties					
§7.28.1	border-after-precedence	Basic	no	no	no	
§7.28.2	border-before-precedence	Basic	no	no	no	
§7.28.3	border-collapse	Extended	partial	partial	partial	value "collapse-with-precedence" not yet supported
§7.28.4	border-end-precedence	Basic	no	no	no	
§7.28.5	border-separation	Extended	yes	yes	yes	
§7.28.6	border-start-precedence	Basic	no	no	no	
§7.28.7	caption-side	Complete	no	no	no	
§7.28.8	column-number	Basic	yes	yes	yes	
§7.28.9	column-width	Basic	yes	yes	yes	
§7.28.10	empty-cells	Extended	no	no	no	
§7.28.11	ends-row	Extended	yes	yes	yes	
§7.28.12	number-columns-repeated	Basic	yes	yes	yes	
§7.28.13	number-columns-spanned	Basic	yes	yes	yes	
§7.28.14	number-rows-spanned	Basic	yes	yes	yes	
§7.28.15	starts-row	Extended	yes	yes	yes	
§7.28.16	table-layout	Extended	no	no	no	
§7.28.17	table-omit-footer-at-break	Extended	yes	yes	yes	

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.28.18	table-omit-header-at-break	Extended	yes	yes	yes	
§7.29	Writing-mode-related Properties					
§7.29.1	direction	Basic	no	no	no	
§7.29.2	glyph-orientation-horizontal	Extended	no	no	no	
§7.29.3	glyph-orientation-vertical	Extended	no	no	no	
§7.29.4	text-altitude	Extended	no	no	no	
§7.29.5	text-depth	Extended	no	no	no	
§7.29.6	unicode-bidi	Extended	no	no	no	
§7.29.7	writing-mode	Basic	no	yes	yes	[1.1 and later] only horizontal left-to-right and right-to-left modes
§7.30	Miscellaneous Properties					
§7.30.1	change-bar-class	Extended	no	no	no	
§7.30.2	change-bar-color	Extended	no	no	no	
§7.30.3	change-bar-offset	Extended	no	no	no	
§7.30.4	change-bar-placement	Extended	no	no	no	
§7.30.5	change-bar-style	Extended	no	no	no	
§7.30.6	change-bar-width	Extended	no	no	no	
§7.30.7	content-type	Extended	no	no	no	
§7.30.8	id	Basic	partial	partial	partial	IDs on table-header, table-footer, table-body, table-row, table-and-

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
						caption, table-caption, inline-container and bidi-override are not available, yet.
[§7.30.9](#)	intrinsic-scale-value	Extended	no	no	no	
[§7.30.10](#)	page-citation-strategy	Extended	no	no	no	
[§7.30.11](#)	provisional-label-separation	Basic	yes	yes	yes	
[§7.30.12](#)	provisional-distance-between-starts	Basic	yes	yes	yes	
[§7.30.13](#)	ref-id	Extended	yes	yes	yes	
[§7.30.14](#)	scale-option	Extended	no	no	no	
[§7.30.15](#)	score-spaces	Extended	no	no	no	
[§7.30.16](#)	src	Basic	yes	yes	yes	
[§7.30.17](#)	visibility	Extended	no	no	no	
[§7.30.18](#)	z-index	Extended	no	no	no	
[§7.31](#)	Shorthand Properties					
[§7.31.1](#)	background	Complete	no	no	no	
[§7.31.2](#)	background-position	Complete	yes	yes	yes	
[§7.31.3](#)	border	Complete	yes	yes	yes	
[§7.31.4](#)	border-bottom	Complete	yes	yes	yes	
[§7.31.5](#)	border-color	Complete	yes	yes	yes	
[§7.31.6](#)	border-left	Complete	yes	yes	yes	
[§7.31.7](#)	border-right	Complete	yes	yes	yes	
[§7.31.8](#)	border-style	Complete	yes	yes	yes	
[§7.31.9](#)	border-spacing	Complete	yes	yes	yes	
[§7.31.10](#)	border-top	Complete	yes	yes	yes	

Citation	Property Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	develop- ment	
§7.31.11	border-width	Complete	yes	yes	yes	
§7.31.12	cue	Complete	na	na	na	
§7.31.13	font	Complete	partial	partial	partial	Enum values other than "inherit" not yet supported.
§7.31.14	margin	Complete	yes	yes	yes	
§7.31.15	padding	Complete	yes	yes	yes	
§7.31.16	page-break-after	Complete	yes	yes	yes	
§7.31.17	page-break-before	Complete	yes	yes	yes	
§7.31.18	page-break-inside	Complete	yes	yes	yes	
§7.31.19	pause	Complete	na	na	na	
§7.31.20	position	Complete	yes	yes	yes	
§7.31.21	size	Complete	no	no	no	
§7.31.22	vertical-align	Complete	partial	partial	partial	Percentages are not supported, yet.
§7.31.23	white-space	Complete	yes	yes	yes	
§7.31.24	xml:lang	Complete	yes	yes	yes	Very basic parsing; no validation of the specified value.

4 XSL-FO Core Function Library Support Table (§5.10)

The following is a summary of FOP's current support for the XSL-FO Core Function Library.

Citation	Function Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	development	
§5.10.1	Number Functions					
§5.10.1	floor	Basic	yes	yes	yes	

Citation	Function Name	XSL-FO Conformance Level	Support in FOP			Comments
			1.0 (stable)	1.1 (stable)	development	
§5.10.1	ceiling	Basic	yes	yes	yes	
§5.10.1	round	Basic	yes	yes	yes	
§5.10.1	min	Basic	yes	yes	yes	
§5.10.1	max	Basic	yes	yes	yes	
§5.10.1	abs	Basic	yes	yes	yes	
§5.10.2	Color Functions					
§5.10.2	rgb	Basic	yes	yes	yes	
§5.10.2	rgb-icc	Basic	yes	yes	yes	
§5.10.2	system-color	Basic	yes	yes	yes	
§5.10.3	Font Functions					
§5.10.3	system-font	Basic	no	no	no	
§5.10.4	Property Value Functions					
§5.10.4	inherited-property-value	Basic	yes	yes	yes	
§5.10.4	label-end	Basic	yes	yes	yes	
§5.10.4	body-start	Basic	yes	yes	yes	
§5.10.4	from-parent	Basic	yes	yes	yes	
§5.10.4	from-nearest-specified-value	Basic	yes	yes	yes	
§5.10.4	from-page-master-region	Basic	no	no	no	
§5.10.4	from-table-column	Basic	yes	yes	yes	
§5.10.4	proportional-column-width	Basic	yes	yes	yes	
§5.10.4	merge-property-values	Basic	no	no	no	