#### [fill](fill.docx) (Shape Fill Properties)

This element specifies how the [path](path.docx) should be filled if something beyond a solid color [fill](fill.docx) is desired.  The attributes of the [fill](fill.docx) element can be used to describe a powerful set of image- or gradient-based [fill](fill.docx) patterns.   Extensions to the [VML](VML.docx) [fill](fill.docx) definition are encoded as sub-elements of [fill](fill.docx).

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| Parent Elements |
| [arc](arc.docx) (§); [background](background.docx) (§); [background](background.docx) (§); [curve](curve.docx) (§); [group](group.docx) (§); [image](image.docx) (§); [line](line.docx) (§); object (§); [oval](oval.docx) (§); pict (§); pict (§); [polyline](polyline.docx) (§); [rect](rect.docx) (§); [roundrect](roundrect.docx) (§); shape (§); [shapedefaults](shapedefaults.docx) (§); [shapetype](shapetype.docx) (§) |

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| Child Elements | Subclause |
| [fill](fill.docx) (Shape Fill Extended Properties) | § |

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| Attributes | Description |
| alignshape (Align Image With Shape) | Specifies whether an [image](image.docx) will align with the shape. [Default](Default.docx) is true.[Example: The [image](image.docx) displayed in the shape is not rotated even though the shape is rotated 30 degrees:<v:[shape](shape.docx) coordorigin="0,0" coordsize="200,200" style="top:1;left:1;width:50; height:50;rotation:30" [path](path.docx)="m 1,1 l 1,200, 200,200, 200,1 x e"> <v:[fill](fill.docx) alignshape="false" type="frame" src="myimage.gif"> </v:[fill](fill.docx)></v:[shape](shape.docx)> Applied to a simple square the [fill](fill.docx) looks like this:end example]The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| althref (Alternate Image Reference Location)Namespace: urn:schemas-microsoft-com:office:office | Defines an alternate reference for an [image](image.docx) in Macintosh PICT format.[Example:<v:[fill](fill.docx) ... althref="myimage.pcz" ... ></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| angle (Gradient Angle) | Specifies the direction of a gradient. The vector of a gradient is perpendicular to the vector of the blend direction from one color to another. The default value is zero degrees, which is a horizontal vector from left to right. Positive angles rotate the gradient in a counter-clockwise direction.[Example: The [fill](fill.docx) is composed of a 45-degree gradient of two colors. Blue is in the top left corner and red is in the bottom right corner.<v:[fill](fill.docx) type="gradient" color="red" color2="blue" angle="45"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema decimal datatype. |
| aspect (Image Aspect Ratio) | Specifies how the [fill](fill.docx) [image](image.docx) aspect ratio will be preserved. [Default](Default.docx) is ignore. Allowed values are:* ignore - Ignore aspect ratio.
* atleast - At least as large as defined by the size attribute.
* atmost - No larger than that defined by the size attribute.

In each case, the size attribute will be adjusted to preserve the aspect ratio of the image.[Example: The [image](image.docx) that makes up the [fill](fill.docx) is no larger than 20 points by 20 points, limiting the size of the tiles inside the shape.<v:[fill](fill.docx) type="tile" aspect="atmost" size="20pt,20pt" src="myimage.gif"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the [ST\_ImageAspect](ST_ImageAspect.docx) simple type (§). |
| color (Primary Color) | Specifies the main [fill](fill.docx) color; functions the same as the fillcolor attribute of the shape element (§). This attribute overrides the shape's fillcolor. [Default](Default.docx) is white. Colors are typically specified as either a named color, such as red, or six hexadecimal digits representing the red, green and blue values of the color, such as #00FF30. Full details are specified in the simple type description.[Example: The shape is blue:<v:shape ... fillcolor="red" ... > <v:[fill](fill.docx) color="blue"/></v:[shape](shape.docx)>end example]The possible values for this attribute are defined by the [ST\_ColorType](ST_ColorType.docx) simple type (§). |
| color2 (Secondary Color) | Specifies the secondary [fill](fill.docx) color, used when a [fill](fill.docx) type is a pattern or a gradient. [Default](Default.docx) is white. Colors are typically specified as either a named color, such as red, or six hexadecimal digits representing the red, green and blue values of the color, such as #00FF30. Full details are specified in the simple type description.[Example: The shape is filled with a horizontal gradient with red at the bottom and blue on top:<v:[fill](fill.docx) type="gradient"  color="red" color2="blue"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the [ST\_ColorType](ST_ColorType.docx) simple type (§). |
| colors (Intermediate Colors) | Specifies an array of comma-separated percentage-color pairs that define intermediate colors and their positions in a gradient fill. The primary color, specified either by the fillcolor attribute of the shape element (§) or the color attribute of the [fill](fill.docx) element (§), is used at the 0% endpoint. The secondary color, specified by the color2 attribute of the [fill](fill.docx) element (§), is used at the 100% endpoint. The numeric values may also be specified in 1/65536-ths if a trailing "[f](f.docx)" is supplied. For example, a value of "52429f" represents 52429/65536 or 0.8.[Example: The shape is filled with a horizontal gradient colored, from bottom to top, red, yellow, green, blue:<v:[fill](fill.docx) type="gradient"  color="red" color2="blue" colors="30% yellow,70% green"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| detectmouseclick (Detect Mouse Click)Namespace: urn:schemas-microsoft-com:office:office | Specifies whether a mouse click is detected on the [fill](fill.docx) of a shape.The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| focus (Gradient Center) | Specifies the center starting position of a gradient. Values range from 100% to -100%. [Default](Default.docx) is 0.A value of 100% or -100% reverses the direction of the gradient (in effect swapping color and color2). A value of 50% changes the gradient so that color is at both ends and color2 is in the middle. A value of -50% changes the gradient so that color2 is at both ends and color is in the middle.[Example: The shape is filled with a horizontal gradient with red at both ends and blue in the middle:<v:[fill](fill.docx) type="gradient"  color="red" color2="blue" focus="50%"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| focusposition (Radial Gradient Center) | Specifies the position of the center rectangle of a radial gradient. The vector is a fraction of the width and height of the shape. The first is a percentage of the [fill](fill.docx) to the left edge; the second is a percentage of the [fill](fill.docx) to the top. [Default](Default.docx) is 0,0. To position a radial [fill](fill.docx) at the center of a shape, use a value of 50%,50%.[Example: The shape is filled with a rectangular gradient positioned in the top-left quadrant of the shape. The interior of the gradient is blue and the exterior is red:<v:[fill](fill.docx) type="gradientradial"  color="red" color2="blue" focusposition="25%,25%"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| focussize (Radial Gradient Size) | Specifies the size of the center rectangle of a radial gradient. The vector is a fraction of the width and height of the shape. The first is a percentage of the [fill](fill.docx) to the right edge; the second is a percentage of the [fill](fill.docx) to the bottom. [Default](Default.docx) is 0,0.A focussize value of 100%,100% and a focusposition of 0,0 makes color2 dominate the gradient completely. Small values of around 10%,10% are recommended for balanced gradients.[Example: The shape is filled with a rectangular gradient positioned in the top-left quadrant of the shape. The interior of the gradient is blue and the exterior is red. The red portion is wider on the bottom and right sides of the blue region. The pure blue region is 25% the width and 25% the height of the shape:<v:[fill](fill.docx) type="gradientradial"  color="red" color2="blue" focussize="25%,25%" focusposition="25%,25%"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| href (Hyperlink Target)Namespace: urn:schemas-microsoft-com:office:office | Specifies the URL to the original [image](image.docx) file. Used only if the picture has been linked and embedded. [Default](Default.docx) is no value.[Example:<v:[fill](fill.docx) ... o:href="myimage.gif" ... ></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| id (Unique Identifier) | Specifies a unique identifier that can be used to reference a [VML](VML.docx) object.[Default](Default.docx) is no value.[Example:<v:shape ... id="myShape" ... ></v:[shape](shape.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| id (Relationship to Part)Namespace: .../officeDocument/2006/relationships | Specifies the relationship ID of the relationship to the [image](image.docx) used for this fill. The specified relationship shall be of type http://schemas.openxmlformats.org/officeDocument/2006/relationships/[image](image.docx) or the document shall be considered non-conformant.[Example: The markup specifies the associated relationship part with relationship ID rId10 contains the corresponding relationship information for the fill:< ... r:id="rId10" />end example]The possible values for this attribute are defined by the [ST\_RelationshipId](ST_RelationshipId.docx) simple type (§). |
| method (Gradient Fill Method) | Specifies the method used to generate the transition from color to color2 in a gradient fill. [Default](Default.docx) is sigma.[Example:<v:[fill](fill.docx) type="gradient"  color="red" color2="blue" method="any"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the [ST\_FillMethod](ST_FillMethod.docx) simple type (§). |
| on (Fill Toggle) | Specifies whether to [fill](fill.docx) the shape. [Default](Default.docx) is true. This attribute overrides the shape's [fill](fill.docx) attribute.[Example: The shape has a transparent fill:<v:shape ... [fill](fill.docx)="true" ... > <v:[fill](fill.docx) color="red" on="false"> </v:[fill](fill.docx)></v:[shape](shape.docx)>end example]The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| opacity (Primary Color Opacity) | Specifies the opacity of the primary [fill](fill.docx) color. [Default](Default.docx) is 1.0. This numeric value may also be specified in 1/65536-ths if a trailing "[f](f.docx)" is supplied. For example, a value of "52429f" represents 52429/65536 or 0.8.[Example: The red color is 25% opaque:<v:[fill](fill.docx) type="gradient" color="red" color2="blue" opacity=".25"></v:[fill](fill.docx)> opacity="1" opacity=".25"end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| opacity2 (Secondary Color Opacity)Namespace: urn:schemas-microsoft-com:office:office | Specifies the opacity of the secondary [fill](fill.docx) color. [Default](Default.docx) is 1.0. This numeric value may also be specified in 1/65536-ths if a trailing "[f](f.docx)" is supplied. For example, a value of "52429f" represents 52429/65536 or 0.8.[Example: The blue color is 25% opaque:<v:[fill](fill.docx) type="gradient" color="red" color2="blue" o:opacity2=".25"></v:[fill](fill.docx)> opacity2="1" opacity2=".25"end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| origin (Fill Image Origin) | Specifies the position of the origin of a [fill](fill.docx) [image](image.docx) as a point relative to the top left corner of the image. The vector is a fraction of the width and height of the image. [Default](Default.docx) is the center of the image. These numeric values may also be specified in 1/65536-ths if a trailing "[f](f.docx)" is supplied. For example, a value of "52429f" represents 52429/65536 or 0.8.[Example: The origin of the [image](image.docx) is 25% to the right and 25% above the image's top left corner:<v:[fill](fill.docx) type="tile" src="myimage.gif" origin="0.25,-0.25"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| position (Fill Image Position) | Specifies the position of the origin of a [fill](fill.docx) [image](image.docx) as a point within its containing shape. The vector is a fraction of the width and height of the shape. These numeric values may also be specified in 1/65536-ths if a trailing "[f](f.docx)" is supplied. For example, a value of "52429f" represents 52429/65536 or 0.8.[Example: The origin of the [image](image.docx) is positioned 25% to the right of the left edge of the shape and 25% down from the shape's top:<v:[fill](fill.docx) type="tile" src="myimage.gif"  position="0.25,0.25"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| recolor (Recolor Fill as Picture) | Specifies that the [fill](fill.docx) uses an image. [Default](Default.docx) is false.[Example:<v:[fill](fill.docx) r:id="rId4" o:title="MyPic" recolor="true"  type="frame"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| relid (Relationship to Part)Namespace: urn:schemas-microsoft-com:office:office | Specifies the relationship ID of the relationship to the image. The specified relationship shall be of type http://schemas.openxmlformats.org/officeDocument/2006/relationships/[image](image.docx) or the document shall be considered non-conformant.[Example: The markup specifies the associated relationship part with relationship ID rId10 contains the corresponding relationship information:<v:[fill](fill.docx) ... o:relid="rId10" ...></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the [ST\_RelationshipId](ST_RelationshipId.docx) simple type (§). |
| rotate (Rotate Fill with Shape) | Specifies whether the [fill](fill.docx) is rotated with the shape. [Default](Default.docx) is false.[Example: The gradient is rotated with the shape:<v:[fill](fill.docx) color2="white" focus="100%" rotate="true"  type="gradient"></v:[fill](fill.docx)> rotate="true" rotate="false"end example]The possible values for this attribute are defined by the [ST\_TrueFalse](ST_TrueFalse.docx) simple type (§). |
| size (Fill Image Size) | Specifies the size of the [fill](fill.docx) image. [Default](Default.docx) is the native [image](image.docx) pixel size.[Example: The [image](image.docx) is reduced in size disproportionately:<v:[fill](fill.docx) type="tile" src="myimage.gif" size="25pt,15pt"></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| src (Fill Image Source) | Specifies the URL specifying the [fill](fill.docx) [image](image.docx) to use.[Example:<v:[fill](fill.docx) ... src="myimage.gif" ... ></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| title (Title)Namespace: urn:schemas-microsoft-com:office:office | Specifies the title of an embedded [fill](fill.docx) image. This is typically set to the comment property of the [image](image.docx), which is often blank.[Example:<v:[fill](fill.docx) ... o:title="alt text" ... ></v:[fill](fill.docx)>end example]The possible values for this attribute are defined by the XML Schema string datatype. |
| type (Fill Type) | Specifies the type of fill. [Default](Default.docx) is solid. Allowed values are:* solid
* gradient
* gradientradial
* tile
* pattern
* frame

[Example: Applied to a simple square using the following [fill](fill.docx) element, the three gradient types look like this:<v:[fill](fill.docx) color="red" color2="blue" type="solid"></v:[fill](fill.docx)> type="solid" type="gradient" type="gradientradial"Applied to a simple square using the following [fill](fill.docx) elements, the three [image](image.docx) types look like this:

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|  | <v:[fill](fill.docx) src="myimage.gif" type="tile" size="50%,50%"></v:[fill](fill.docx)> |
|  | <v:[fill](fill.docx) src="myimage.gif" type="frame" size="50%,50%"></v:[fill](fill.docx)> |
|  | <v:[fill](fill.docx) src="myimage.gif"  color="red" color2="blue" type="pattern"></v:[fill](fill.docx)> |

end example]The possible values for this attribute are defined by the [ST\_FillType](ST_FillType.docx) simple type (§). |

The following XML Schema fragment defines the contents of this element:

<complexType name="CT\_Fill">

 <sequence>

 <element ref="o:fill" minOccurs="0"/>

 </sequence>

 <attributeGroup ref="AG\_Id"/>

 <attribute name="type" type="[ST\_FillType](ST_FillType.docx)" use="optional"/>

 <attribute name="on" type="[ST\_TrueFalse](ST_TrueFalse.docx)" use="optional"/>

 <attribute name="color" type="[ST\_ColorType](ST_ColorType.docx)" use="optional"/>

 <attribute name="opacity" type="xsd:string" use="optional"/>

 <attribute name="color2" type="[ST\_ColorType](ST_ColorType.docx)" use="optional"/>

 <attribute name="src" type="xsd:string" use="optional"/>

 <attribute ref="o:href"/>

 <attribute ref="o:althref"/>

 <attribute name="size" type="xsd:string" use="optional"/>

 <attribute name="origin" type="xsd:string" use="optional"/>

 <attribute name="position" type="xsd:string" use="optional"/>

 <attribute name="aspect" type="[ST\_ImageAspect](ST_ImageAspect.docx)" use="optional"/>

 <attribute name="colors" type="xsd:string" use="optional"/>

 <attribute name="angle" type="xsd:decimal" use="optional"/>

 <attribute name="alignshape" type="[ST\_TrueFalse](ST_TrueFalse.docx)" use="optional"/>

 <attribute name="focus" type="xsd:string" use="optional"/>

 <attribute name="focussize" type="xsd:string" use="optional"/>

 <attribute name="focusposition" type="xsd:string" use="optional"/>

 <attribute name="method" type="[ST\_FillMethod](ST_FillMethod.docx)" use="optional"/>

 <attribute ref="o:detectmouseclick"/>

 <attribute ref="o:title"/>

 <attribute ref="o:opacity2"/>

 <attribute name="recolor" type="[ST\_TrueFalse](ST_TrueFalse.docx)" use="optional"/>

 <attribute name="rotate" type="[ST\_TrueFalse](ST_TrueFalse.docx)" use="optional"/>

 <attribute ref="r:id" use="optional"/>

 <attribute ref="o:relid" use="optional"/>

</complexType>