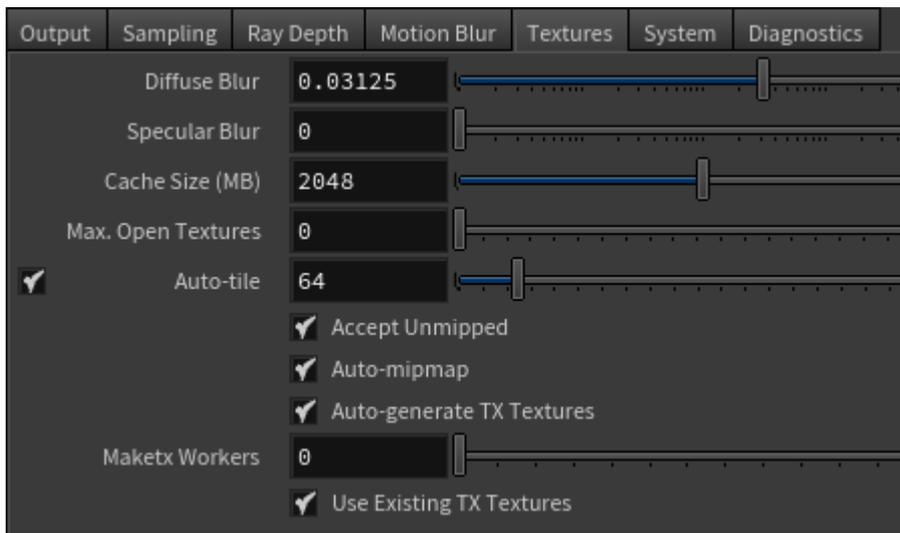# Textures.

Controls in the Textures tab let you specify how to handle texture files in Arnold.

> To minimize memory consumption, render times and network stress, it is strongly advised that you convert all your textures with maketx to linear, tiled and mipmapped .tx textures.

Diffuse Blur

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Specular Blur

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Cache Size (MB)

The maximum amount of memory to be used for texture caching. Arnold uses a tile-based cache with an LRU (Least Recently Used) type algorithm, where the least recently used tiles are discarded when the texture cache is full.

Max. Open Textures

The maximum number of files that the texture system keeps open at any given time to avoid excessive closing and re-opening of files when caching individual texture tiles. Increasing this number may result in slightly better texture caching performance. On the other hand, if this value is higher than the maximum number of concurrently open files supported by the operating system (e.g. Linux vs Windows), some texture lookups may fail and return red. This is set by default to 0, which means that the maximum number of texture files that can be simultaneously opened is automatically computed by Arnold using a heuristic that tries to guess what the optimal number would be for each particular machine. We expect that the majority of users will be able to leave this at 0 and get the best performance.

Auto-tile

If a texture map file is stored in scanline mode (e.g. a JPEG file), enabling this option will trigger the generation of tiles on demand. The output will be stored in memory and put in the global texture cache. This process increases render time, especially for scenes with many

high-resolution textures. To avoid this performance slowdown, it is recommended to use texture file formats that natively support tile mode (such as TIFF and EXR). You can create tile textures with the maketx utility.

Accept Unmipped

High-resolution unmipped texture maps are very inefficient to render because the highest resolution level must be loaded into memory regardless of the distance rather than a lower resolution level. When this flag is disabled, any attempt at loading an unmipped file will produce an error and abort the renderer.

Auto-mipmap

If a texture map file is not natively mipmapped (e.g. a JPEG file), enabling this option will trigger the generation of a mipmap on demand. The output will be stored in memory and put in the global texture cache. This mipmap generation increases render time, especially for scenes with many high-resolution textures. To avoid this performance slowdown, it is recommended to use texture file formats that natively support mipmapping (such as TIFF and EXR), where the mipmaps are preprocessed before the render and stored in the file. This preprocessing can be done with the maketx utility.

> Disabling 'options.texture_automip' will result in unfiltered non-mipmapped textures.

Automatically Generate .tx Textures

Automatically generates tiled and mipmapped TX textures. The TX texture will be linearized according to the *colorspace* parameter.

Maketx Workers

...

Use Existing .tx Textures

Allow HtoA to use pre-defined .tx files, if they exist.