Stylized BSDF for Blender 5.1.0

Product Description

Stylized BSDF is a complete NPR (Non-Photorealistic Rendering) shader for Blender 5.1 that gives you studio-quality stylized materials without complex node setups.

Unlike standard toon shaders that only handle basic cel shading, Stylized BSDF provides a full suite of artist-friendly controls—including multi-layered patterns, stylized reflections, lineart, subsurface scattering, and independent shadow masking. Everything is packaged into a single, easy-to-use node group.

Whether you're creating anime characters, illustrated environments, motion graphics, or concept art, Stylized BSDF adapts to your style.

What makes it different? Every component is designed for stylized workflows, not physically accurate rendering. The metallic reflections are fake and artist-controlled. The emission uses Fresnel to glow brighter at center. Shadows are posterized, not soft. These are deliberate choices made for NPR artists, by an NPR artist.

Key Features:

- Pattern System
  Apply stylized textures to both diffuse shading and highlights independently. Choose from Crosshatch, Halftone, Dash, or Paint patterns. Adjust aspect ratio to match your screen space resolution, then scale and intensify each pattern separately.

- Stylized Specular & Metallic
  Fake, artist-friendly reflections that don't obey physical rules. Control Roughness (highlight sharpness), Reflection Smoothness (roundness of reflections), and Reflection Detail (scale of reflection patterns). The Metallic toggle enables stylized reflective surfaces without PBR complexity.

- Lineart System
  Generate stylized outlines directly within the shader. Control Thickness, Threshold, Opacity, and Color. The Multiply Self toggle samples the base shading and multiplies it over itself—creating lineart that dynamically adapts to the surface.

- Subsurface Scattering
  Add soft, colored light bleed beneath surfaces. Control Distance, Weight, Tint, and Tint Factor. Essential for skin, wax, leaves, or any material needing translucency.

- Shadow Mask Input
  Connect any mask (vertex color, texture, etc.) to selectively control where shadows

appear. The Ignore Shading toggle bypasses scene lighting entirely and uses only the connected mask.

- Full AOV Support
  All major components output as separate AOVs for independent compositing control: Base Color, Patterns, Highlight Pattern, Specular, Metallic, Subsurface, Lineart, Shading, and Shadow Mask.

Requirements: Blender 5.1 or later

Installation

1. Download the Stylized_BSDF.blend file
2. In your project, go to File > Append or File > Link
3. Navigate to the downloaded .blend file > NodeTree
4. Select Stylized_BSDF
5. In Shader Editor, press Shift + A > Group > Stylized_BSDF

Inputs

Base Color	Connect your main color/albedo texture here.
Shadow Levels	Sets the number of shadow bands.
Alpha	Transparency control.
Normal	Connect a normal map here to add simulated detail.

Controls Reference

SHADING

Shadow Lift	Brighten shadows for softer toon shading	0.0 to 1.0
Shadow Saturation	Saturate shadows to account for the brightning	0.0 to 100.0

SPECULAR

Highlight Threshold	Controls where the highlight (brightest area) begins.	0.0 to 1.0
Roughness	Controls the sharpness or spread of the specular highlights only. Lower values = tighter, sharper highlights. Higher values = broader, softer highlights. Does not affect diffuse shading.	0.0 to 1.0
Metallic	A stylized metallic control that enables a stylized reflective surface with fake, artist-controlled reflections. At 0.0, the surface behaves as a non-metal with standard toon shading. At 1.0, the surface becomes metallic with stylized, non-realistic reflections.	0.0 to 1.0
Reflection Smoothness	Controls the shape of the stylized reflections. Does not blur or soften the reflections. Instead, higher values make the reflections appear rounder and more compact.	0.0 to 1.0
Reflection Detail	Determines the scale of the stylized fake reflections. Lower values = larger, broader reflection patterns. Higher values = smaller, tighter reflection patterns.	0.0 to 1000.0

PATTERNS (Diffuse Pattern)

Pattern Type (Dropdown)	Selects the stylized texture applied to the diffuse shading. Options: Clean (no pattern), Crosshatch, Halftone, Dash, Paint	N/A
Aspect Ratio (Menu)	Corrects the scale of the pattern to match your render's screen space resolution. Prevents	N/A

	patterns from appearing stretched or squashed. Options: 16:9 (widescreen/landscape), 9:16 (portrait), 1:1 (square), 4:3 (standard), Custom (use custom dimensions).	
Pattern Scale	Controls the size of the selected pattern. Higher values = smaller, more repeated pattern elements. Lower values = larger, more spread out pattern elements.	0.0 to 1000.0
Pattern Intensity	Controls how strongly the pattern affects the underlying diffuse shading. Higher values = more visible pattern.	0.0 to 1.0

HIGHLIGHT PATTERN

Pattern Type (Dropdown)	Selects the stylized texture applied specifically to the highlight areas. Options: Clean (no pattern), Crosshatch, Halftone, Dash, Paint	N/A
Pattern Scale	Controls the size of the selected pattern. Higher values = smaller, more repeated pattern elements. Lower values = larger, more spread out pattern elements.	0.0 to 1000.0+
Pattern Intensity	Controls how strongly the pattern affects the highlights. Higher values = more visible pattern in bright areas.	0.0 to 1.0

CUSTOM LIGHT COLOR

Highlight Color	Tints the brightest areas of the material independently from the scene lighting.	RGB Color Picker
Shadow Color	Tints the shadow bands independently from scene lighting.	RGB Color Picker

Tint Color	A global color wash applied over the entire material. Works like a color overlay.	RGB Color Picker
Tint Intensity	Controls the strength of the global Tint Color overlay.	0.0 to 1.0

LINEART

Thickness	Controls the width of the lineart strokes. Larger values = thicker, more prominent lines.	0.0 to 1.0
Threshold	Determines which edges receive lineart based on normals. Lower values = more lines. Higher values = fewer lines.	0.0 to 1.0
Opacity	Controls the transparency of the lineart. At 1.0, lines are fully opaque. At 0.0, lines are invisible.	0.0 to 1.0
Color	The color of the lineart strokes. Common choices include black, dark brown, or colored lines for stylized looks.	RGB Color Picker
Multiply Self	When enabled, the lineart no longer uses a solid Color. Instead, it samples the base shading of the material and multiplies it over itself. This creates lineart that dynamically adapts to the underlying brightness and color of the surface.	N/A

SUBSURFACE

Distance	Controls how far light scatters beneath the surface. Higher values = light penetrates deeper, creating a softer, more translucent effect. Essential for skin, wax, or leaf materials.	0.0 to 50.0
Weight	Controls the intensity of the subsurface scattering effect. Higher values = more pronounced SSS.	0.0 to 10.0

Tint	The color of the scattered light beneath the surface. For skin, this is often reddish/orange. For leaves, green.	RGB Color Picker
Tint Factor	Controls how strongly the Tint color influences the SSS effect. Higher values = more tinted scattering.	0.0 to 1.0

AMBIENT OCCLUSION

AO Opacity	Controls the darkness strength of the ambient occlusion in crevices and contact areas. Higher values = darker, more pronounced AO.	0.0 to 1.0
AO Threshold	Controls how close surfaces must be for AO to appear. Lower values = AO affects wider, more subtle areas. Higher values = AO only appears in the tightest crevices.	0.0 to 1.0

EMISSION

Color	The color of the emitted light.	RGB Color Picker
Strength	The brightness of the emission.	0.0 to 100.0+
IOR (Index of Refraction)	Uses Fresnel to create the effect that emission is brighter at the center of the object and dimmer toward the edges.	0.0 to 1.0

SHADOW MASK

Shadow Mask (Input Socket)	Connect a custom mask (e.g. vertex color, texture) to selectively control where shadows appear on the material. Black areas = shadows fully active. White areas = shadows disabled.
Ignore Shading (Toggle)	When enabled, the material ignores all scene lighting and instead uses only the Shadow Mask input to determine where shadows appear.

Shader AOVs (Arbitrary Output Variables)

AOVs allow you to render specific shader components as separate output passes for greater control in compositing. This is useful for adjusting shadows, highlights, or emission independently in post-production.

How to use AOVs:

1. In Render Properties, go to the AOVs panel
2. Add a new AOV and name it exactly as listed below
3. In the Compositor, the AOV will appear as an output from the Render Layers node

Available AOVs:

AOV Name	Description
Base Color	Outputs the raw base color of the material without any lighting or shading applied
Patterns	Outputs the diffuse pattern texture in isolation
Highlight Pattern	Outputs the highlight pattern texture in isolation
Specular	Outputs the stylized specular reflection component in isolation
Metallic	Outputs the stylized metallic reflection component in isolation
Subsurface	Outputs the subsurface scattering component in isolation
Lineart	Outputs the lineart strokes in isolation
Shading	Outputs the complete shading (diffuse lighting and shadows) without base color or other components
Shadow Mask	Outputs the connected Shadow Mask input for compositing use

Happy shading!
– Pojo