

Format Comparison Table

SVG vs PNG vs WebP: The Definitive Comparison

About This Document

This reference accompanies the article: SVG vs PNG vs WebP: The Definitive Comparison

Read the full article at: <https://svgeneration.com/docs/svg-vs-raster-comparison>

Article Summary

A data-driven comparison of SVG, PNG, WebP, and AVIF for background patterns with real file size benchmarks.

File Size Benchmarks

Real-world size comparison for a 2020px polka-dot pattern: SVG 85 bytes (base64: 116 bytes) | PNG 800 bytes | WebP 540 bytes | AVIF 420 bytes. At the smallest tile size, SVG is 510 smaller than raster formats. For a complex 300300 pixel pattern, SVG can be 2KB vs PNG 12KB still significantly smaller.

When SVG Wins

SVG is always the best choice for: geometric patterns (lines, circles, polygons, paths), gradient-based patterns, patterns that need colour theming, patterns used across multiple tile sizes, and any pattern that will appear on high-DPI displays. The mathematical nature of SVG means it scales perfectly to 4K displays without any additional file size.

When Raster Wins

Raster formats win for: photographic textures (linen, paper, concrete), hand-drawn patterns with organic imperfections, patterns with complex noise/grain effects that SVG filters can't reproduce efficiently, and any pattern wider than about 500px where the SVG file size would exceed a WebP equivalent.

Free Resources

Visit [SVGeneration.com](https://svgeneration.com) for 600 free SVG background patterns. No attribution required.

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