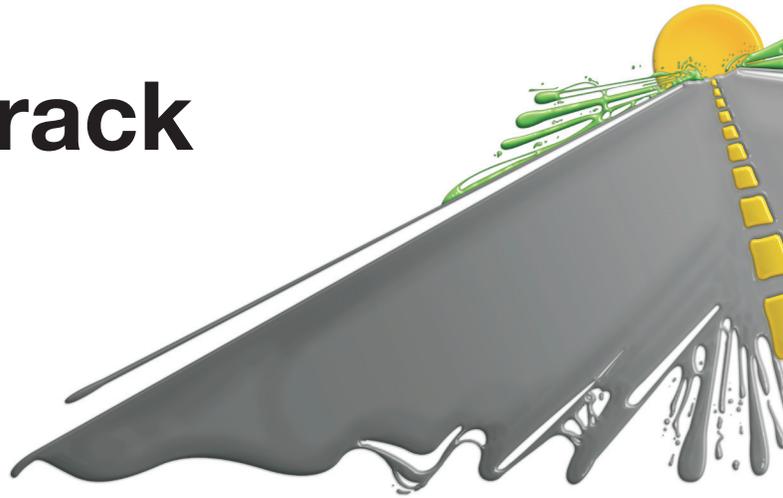


Get on the **fast** track to sustainability



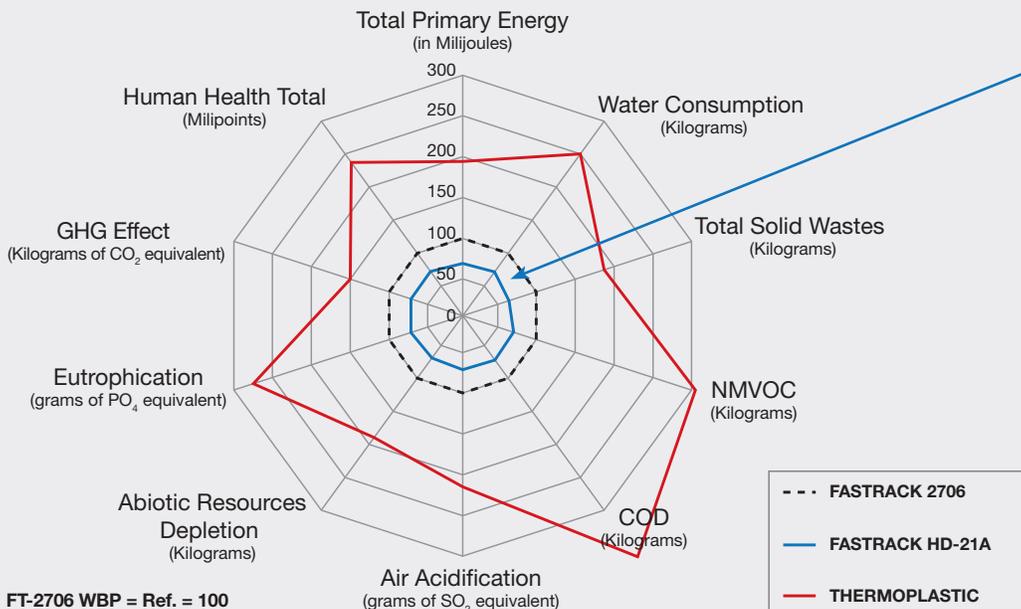
Regular road striping is a top priority that keeps drivers safely on track across the country and across a rapidly expanding world. As more people travel on more roads, there is growing interest in striping systems that produce a bright, reflective line while leaving a smaller environmental footprint. Life Cycle Assessment (LCA) is a tool that can help.

More drivers. More roads. More sustainable solutions.

The introduction of FASTRACK™ Quick-Dry Technology in 1990 drove a mainstream shift from solvent-borne to waterborne traffic paint, dramatically reducing the impact of related VOC emissions on air quality. Today, the road striping industry has another opportunity for improvement by replacing thermoplastic road markings with high-build traffic paint markings made with FASTRACK HD 21A Binder, as demonstrated in Figure 1.

FASTRACK HD 21-A Binder System vs. Hot Melt Thermoplastic

Life Cycle Assessment



Key Learnings

Based on a third-party validated Life Cycle Assessment, striping with high-build traffic paints containing FASTRACK HD-21A Binder reduces road striping's impact potential in 10 out of 10 categories, including:

- VOC Reduction: ~250%
- Solid Waste Reduction: ~150%
- Primary Energy Use Reduction: ~150%
- Human Toxicity Reduction: ~175%

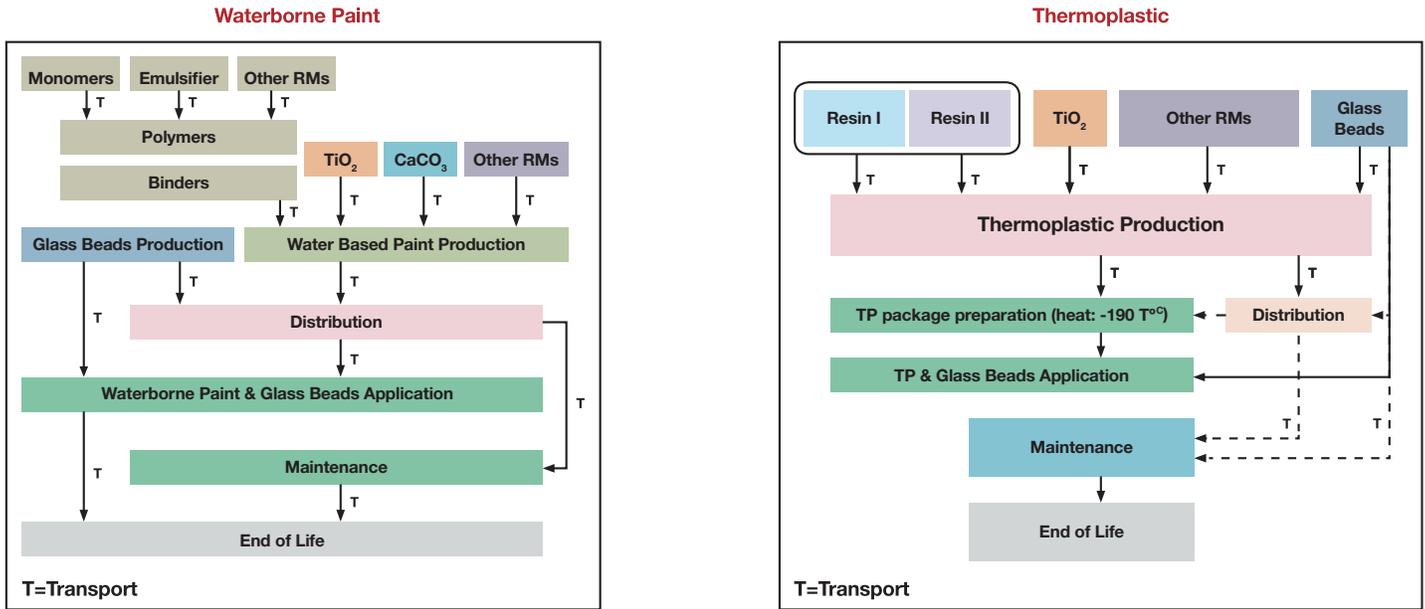
Figure 1. Impact Assessment

Source: Life Cycle Assessment Road Marking Technologies Eco-Profile. Final Report – Nov. 2012. Dr. H. Kheradmand, LCT, LSA & SD Expert, Dow Coating Materials.

Road striping life cycles

LCAs track a product or service from raw material sourcing through end-of-life (cradle to grave). They are typically conducted in accordance with recognized standards such as ISO 14040-14044 and validated by an objective third party. Many factors are taken into consideration. In the case of traffic paint, these would include the raw materials that go into the final paint formulation, as well as how the paint is applied, how it performs and how long it lasts. The results of an LCA help decision-makers choose more sustainable options and assist in the implementation of green procurement programs.

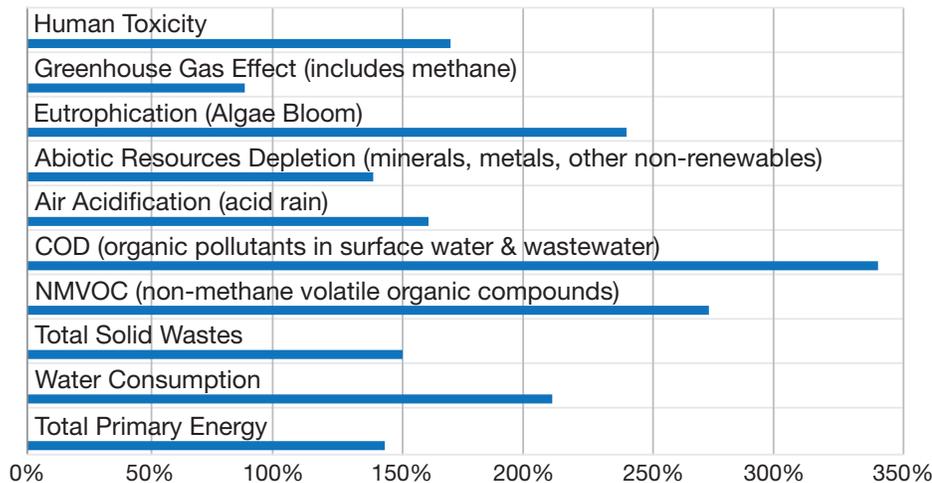
Figure 2. The Life Cycle Assessment of FASTRACK™ HD-21A Binder vs. thermoplastic is based on a cradle-to-grave analysis.



Potential impact reductions

Dow Coating Materials conducted a Life Cycle Assessment (LCA) to compare the environmental and human health impacts of high-build road striping facilitated by FASTRACK HD-21A Waterborne Binder versus hot melt thermoplastic. The results, validated by an objective third party, demonstrate a substantially smaller impact potential when using FASTRACK High-Build Binder Systems versus hot melt thermoplastic, as summarized in Figure 3.

Figure 3. Impact Reduction of FASTRACK HD-21A Binder vs. Hot Melt Thermoplastic



The road to sustainability is an ongoing journey of continuous improvement. With FASTRACK Technologies for road striping, you can take big steps toward a smaller footprint.

Contact Dow Coating Materials to learn more.

In North America: 1-800-447-4369
www.dow.com/fastrack

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