Traffic Paint and Pavement Marking Industry Q&A

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Q1 How would you describe the current state of the traffic paint and pavement marking industry, and what are some key challenges facing the industry today?

Leman: The state of the traffic paint and pavement marking industry is very strong with support from the Infrastructure Investment and Jobs Act bill passed in 2021. Also supporting our industry is an increased focus on road safety and reducing accidents and fatalities. Some key challenges in the recent past have been material supply and labor availability. While the material supply situation seems to have eased, there continues to be challenges with having enough labor to work on all the construction and maintenance infrastructure projects.

Q2 What are some key trends and drivers of technical innovation in the traffic paint market?

Leman: Selection of polymer continues to be a driver of increased durability in traffic paints. For example, most pavement marking products are known by their polymer descriptions (e.g., acrylic, epoxy, thermoplastic, etc.). At Dow, we continue to innovate new products and have launched FASTRACK™ 5408A Emulsion to the industry for increased durability and retroreflectivity as well as colder temperature applications.

Q3 What new technical developments for the road maintenance and traffic paint segment that contractors should be aware of?

Leman: There have been updates to the MUTCD (Manual for Uniform Traffic Control Devices) which now establishes minimum retroreflectivity standards for pavement markings. While the requirements are not considered by many to be too stringent, it is a good start for ensuring pavement markings have good visibility, retroreflectivity, and maintenance. Autonomous vehicle features in automobiles such as lane keep assist rely on detection of pavement markings to work most effectively.

Q4 What are some benefits of using waterborne coatings in traffic paints and pavement markings?

Leman: One of the benefits of longer lasting waterborne traffic paints is that they can extend the amount of time needed for replacement so that maintenance applications do not need to be conducted as often. This is also beneficial when there are challenges with labor availability and participation. Also, waterborne traffic paints do not require equipment to heat the material at high temperatures, saving energy and fuel.

Q5 What benefits do Dow's pavement marking technologies bring to the traffic paint and pavement marking industry?

Leman: FASTRACK™ 5408A Emulsion is a new generation of all-acrylic emulsion for fast-dry waterborne traffic marking paints with improved durability. Traffic marking paints based on FASTRACK™ 5408A Emulsion feature fast dry over a broad range of application conditions and excellent durability in terms of retention of glass beads for night visibility and wear properties over asphalt, concrete, and previously applied markings. Other benefits of FASTRACK™ 5408A Emulsion include enhanced retention of glass beads for excellent long-term night visibility, environmentally friendly formulated VOCs from 50 to 100 g/L, user friendliness, and extending the striping window to include paint application temperatures down to 35°F (and rising).

DURATRACK™ R-110 Emulsion and AEH-100 Resin for Green Bike Lanes: Dow's DURATRACK™ Two-Component Technology for broad area markings make a great point for bicyclist safety. The green bike lane coatings increase the visibility of bicyclists for drivers, safety through clearly delineated space, and motorist yielding behavior to those in the lanes, as well as discourages parking in the bike lane. In addition, it yields pleasant results such as superior adhesion, skid-resistance, UV durability and quick drying time, while enhancing work-zone safety through a speedy and efficient installation process. This traffic paint technology is projected to cut costs per mile by about 80%, which will hopefully lead to more green bike lanes.

Q6 What changes and new innovations do you foresee for the traffic paint and pavement marking segment in the next 10 years and beyond?

Leman: Improved durability, performance and low temperature application continues to be a market need. However, some of the changes can come from expansion of existing best practices such as taking regular retroreflectivity measurements of markings to determine their durability and performance on various road surfaces and traffic conditions. On our own test deck and from NTPEP data we continue to see wide variation in performance of waterborne traffic paints which can be improved by the selection of more durable polymers such as FASTRACK™ 5408A Emulsion.

Lane markings are the positioning rails for automated driving systems and the guard rails for advanced driver assistance systems (ADAS). Road markings are critical to enabling AV Ready Roads, and this requires continued innovation and importance on the items above (durability, retro-reflectivity, etc.). The industry will continue to understand the differences between human vision and machine vision, to optimize markings for machine vision.

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