

Two-component 100% solids epoxy for road striping



CASE STUDY

Challenge

Dakota Traffic Services, a road striping contractor in Tea, South Dakota, was interested in a turnkey truck-mounted proportioning system for applying plural component traffic markings. The systems typically require supply tanks for the coatings, a plural component proportioner, heaters and controls with automatic spray guns.

One of the challenges of the application involves frequent access to and rebuilding of the fluid pumps. Downtime needs to be minimized for the proportioner, which is the core component of the spray system. Durability of the fluid pumps is also crucial for uninterrupted spray intervals on the highway.

Solution

Graco distributor, EnDiSys, LLC, was able to leverage the new Graco XP-h™ Hydraulic Plural-Component Sprayer to develop a turn-key proportioning system that met the application requirements.

Results

The Graco XP-h which was integrated into the line-striping truck by EnDiSys, LLC, has proven to be a high performing solution. The XP-h features two pump lowers instead of three. This is accomplished by shifting the hydraulic motor and balancing the bearing load on the proportioner. The reduction in pump lowers reduces the on-hand repair part inventory. Quick knock-down Xtreme® lowers allows for easier pump access for quick disassembly and repairs.

The Endisys line-striping truck consists of three XP-h systems each with a 290 cc and 145 cc lower providing a 2:1 mix ratio supplying three guns. Operating fluid pressure is around 2,500 psi (172 bar) (17.2 MPa). The XP-h sprayed about 3,000 to 5,000 gallons of material (mixed quantity at 2:1) throughout the season without the need to rebuild the pump lowers.



“Xtreme lowers on the XP-h will cut the pump rebuild time in half compared to the existing system allowing the trucks to return to service quickly. The system was put into service in June 2011 and has not needed a pump lower repair during the 5-month operating period.”

— Dennis Dingmann,
Endisys, LLC

SPECIFICATIONS

END USER

Dakota Traffic Services

INDUSTRY

Pavement marking

APPLICATION

Plural component line striping

Material Specs:

- Name of Material – LS60
- Material Supplier – EPOPLEX

EPOPLEX LS60 is a two component 100% solids epoxy coating material designed as a slow setting highway marking coating offering durability, corrosion and abrasion resistance.

Typical Properties

- Ratio (A:B) by volume: 2:1
- Viscosity:
 - Color: 3960 cps at 70°F (21°C)
475 cps at 125°F (52°C) spray temp
 - Hardener: 1640 cps at 70°F (21°C)
455 cps at 100°F (38°C) spray temp
- Chemistry:
100% Solids epoxy coating

- Colors: Available in highway white, non-lead and black. Custom colors available upon request.
- Track free time at 77°F (25°C):
45 min. or less

GRACO EQUIPMENT

- Graco XP-h™ Hydraulic Plural-Component Sprayer

CONFIGURATION

- Part Number: 284201, XP-h bare proportioner, integrated by Endisys, LLC
- Blue Side (A) Pump: 290 cc
- Red Side (B) Pump: 145 cc
- Heat zones:
A/B and hose, custom control
- Hose:
Individually heated hoses to spray gun

Accessories:

- Heated bulk supply tanks;
Combination electrical, hydraulic, pneumatic power unit

Delivery Method:

- Fusion® AP spray guns



The Graco XP-h Plural-Component Sprayer

EPOPLEX
EPOPLEX logo with a stylized 'E' and 'P' and a blue checkmark.