



EUCLID CHEMICAL

PROJECT PROFILE

INDOT SR 9 FIBER REINFORCED CONCRETE PAVEMENT



PROJECT DATA

Location – Marion, IN

Application – FRC Pavement

Architect/Engineer – Indiana DOT

Contractor – Primco

Concrete Producer – Irving Materials, Inc. (IMI)

Total Distance – 6 miles (10 km)

PRODUCTS FEATURED

TUF-STRAND® SF
Macro-Synthetic Fiber

SCOPE OF PROJECT

- Overlay of State Route 9 using fiber reinforced concrete to improve durability and longevity.

PROJECT SUMMARY

The Indiana Department of Transportation has recently begun utilizing macro-synthetic fiber reinforced concrete pavement overlays to rehabilitate existing asphalt pavements that have failed prematurely. Typical overlay designs are 4.5" (115 mm) thick standard paving mixtures using fly ash with a required 570 psi (3.9 MPa) flexural strength at 7 days. Existing asphalt sections are milled and the new FRC pavements are built using normal concrete pavement machines. State Route 9, near Marion, IN, was completed in 2017 and was 6 miles (10 km) in length requiring 14,000 yd³ (10,700 m³) of concrete reinforced with Euclid Chemical's TUF-STRAND SF fiber at 4 lb/yd³ (2.4 kg/m³).

TUF-STRAND SF fiber was approved after providing a performance based test result and easier mixing and finishing than other commercially available macro-fibers. Concrete was jointed at 6 ft (1.8 m) to reduce curling and maintain tight interlock. The success of this project has led IMI to supply TUF-STRAND SF to two additional projects in 2018 near Lafayette, IN totaling more than 43,000 yd³ (32,800 m³).