

PPG SIGMAFAST™ 278

Quick application, fast drying,
durability and 25-year
operational life expectancy

Case study



The Customer

Sappi Saiccor – pulp and paper company with global operations

The Location

KwaZulu-Natal, South Africa

The Challenge

To provide a protective coating for the Sappi Saiccor mill with a 25-year life expectancy in an aggressive pulp and paper environment

The Solution

All structural steel was coated with the PPG SIGMAFAST™ 278 and PPG SIGMADUR™ 1800 coating system

The Benefits

Our system provided fast drying between primer and intermediate coat, a broad application thickness range, no induction time and high solids

The Result

The three-layer system offered excellent protection and a long operational life expectancy as specified by the customer

The Customer

Sappi is the world's largest manufacturer of dissolving pulp, which is used worldwide by converters to create viscose fiber for fashionable clothing and textiles, acetate tow, pharmaceutical products as well as a wide range of consumer and household products.

Sappi Southern Africa operates five mills and has a combined production capacity of 102,000 m³ of structural lumber; 690,000 tons of paper; 633,000 tons of paper pulp; and over a million tons of dissolving pulp per annum.

The Saiccor mill in KwaZulu-Natal uses renewable wood fiber sourced from South African plantations to manufacture dissolving pulp.

The Challenge

The customer had a number of exacting requirements for the Sappi Saiccor expansion project.

Firstly, we had to prove that we could supply them with a coating system that had a 25-year life expectancy and a 10-year guarantee. Secondly, we had to supply technical support to various fabrication sites, as the project was on a tight timeline and the fast-drying PPG SIGMAFAST 278 product was particularly beneficial in securing this project. Finally, aesthetics was also very important to the customer and was taken into consideration when supplying the coating system proposal.



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The Solution

We proposed a solution using a three-coat system with PPG SIGMAFAST 278 being used as the primer and intermediate with PPG SIGMADUR™ 1800 as the polymeric urethane topcoat in the thicknesses below:

PPG SIGMAFAST 278 @ 150 micron (5.9 mil)

PPG SIGMAFAST 278 @ 150 micron (5.9 mil)

PPG SIGMADUR 1800 @ 75 micron (3 mil)

A specific advantage for the customer is that the economical and efficient PPG SIGMAFAST 278 product is easy to apply with airless equipment and produces excellent fast-drying times. Accordingly, the paint is touch-dry after one hour and ready for overcoating after two hours, which results in a quicker application process. The PPG SIGMAFAST 278 coating also has many certifications, including the ISO 12944:2018 C5 High certification needed to cover this specific 25-year life expectancy demand.



The Benefits

Our robust solution provided pleasing aesthetics and extended corrosion protection for the structural steel on the Woodyard upgrade project. PPG SIGMAFAST 278 has exceptional application properties and also delivers improved manufacturing times for new-build projects, thereby increasing productivity and improving profitability. The tough PPG SIGMADUR 1800 coating is resistant to abrasion and splashes from a variety of oils, paraffins and mild chemicals, plus it has excellent color- and gloss retention.

Our PPG SIGMAFAST 278 two-component, zinc phosphate epoxy primer and buildcoat offers a unique range of features and benefits:

- High solids: 80% of volume solids results in less waste
- Fast drying time, which enables handling soon after application: touch-dry after one hour and dry to overcoat after two hours at 20°C (68°F)
- Wide range of corrosion protection to durably protect customers' assets with only two coats
- Broad range of application thickness to enable high dry-film thickness in one coat: 75–250 microns (3–10 mils)
- Wide, flexible temperature range allows application in all seasons: -5°C (23°F) to 40°C (104°F)
- No induction time
- Easy to apply
- Low-VOC content

The Result

Our PPG SIGMAFAST 278 coating is designed for shop and field applications alike. Its unique film build capabilities, dry time, recoat window and volume solids has proven its value to a wide range of owners and applicators around the world.

The combination of PPG SIGMAFAST 278 and PPG SIGMADUR 1800 offers exceptional corrosion protection and this tough, long-lasting system will protect the customer's fixed asset equipment for many years.



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