



## The development of sustainable paint for coil coated steel



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### ABSTRACT:

The use of organic coatings on coil coated steel is widespread among the construction, automotive industries and for use in domestic appliances. Almost all commercially available protective organic coatings are derived from fossil fuel origins. Increased environmental awareness has driven the requirement for alternatives to fossil fuel based paint chemistries. The main aim of this work is to derive a suitable coating formulation using renewable or recycled feed-stocks that match or exceed current industrial coating performance. Two polyester resins were synthesised with 46% and 30% renewable content and their respective mechanical properties and resistance to accelerated weathering were compared against a standard industrial formulation. The incorporation of 30% renewable content into a polyester resin is optimal to achieve greater flexibility, improved salt spray and QUV resistance when compared to the industry standard coating formulation.



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