

DISCLAIMER

1. Status of the information provided in the report

This is the third Hackwell Group Report on WPC in Europe. The information relating to WPC manufacture and usage in Europe has been gathered and analysed by consultants with several decades of personal experience in the plastics and chemical industries. The first report (2003) was based on over 100 interviews by multilingual specialists, together with an extensive literature database, substantial Internet research and attendances at numerous specialist seminars and international conferences.

The second (2006) report was based on a further 100 new interviews, together with information from several more conferences on both sides of the Atlantic, as well as numerous direct contacts with market participants.

This third report draws on many further interviews with European WPC producers and equipment suppliers, a large number of technical and commercial publications, conference reports and of course Internet searches.

The report does not claim to offer precise WPC formulations or detailed manufacturing procedures. It is intended as guidance for semi-technical and non-technical managers, company owners, entrepreneurs, sales and marketing staff rather than technical specialists who already have first hand experience. Their content (including the parts dealing with WPC properties and performance) is derived from various spoken and written sources over the past ten years of our study of the fast-changing WPC industry. The advice given is therefore dependent on the reliability of these other primary sources

2. What the report covers

The report discusses the production and sale of WPC compositions intended for both the automotive and the non-automotive markets. Typically, wood content is from 40% to 80%.

The term "wood" is used here for a variety of cellulose based products, including waste paper, as well as rice. The statistics quoted in the report refer almost entirely to conventional wood or newspaper. We discuss both thermosetting and thermoplastic resins, but the majority of WPC contains the latter. Bioplastics are also covered in the report.

Three categories of material are excluded from this report, as follows:-

- (1) Laminated or layered materials such as paper-resin laminates of the kind used in kitchen worktops.
- (2) Wood impregnated with a monomer that is then polymerised inside the wood.
- (3) Wood flour filled rubbers

A few novel biomaterials are also not considered in this report because their commercial development is in an early stage.

Unless otherwise stated, the report confines itself to ordinary first-generation WPC. The oriented WPC material from Green Forest Composites LLC is not discussed and as far as we know, European suppliers do not yet produce anything similar.

Geographically, the 2011 Hackwell Report covers WPC in the European Union, Switzerland and Norway.

3. Disclaimer

The information and data presented in this report will be thoroughly researched by consultants well-experienced in the field and will be as reliable as possible at the time of completion. The contents of the report do not represent a recommendation or endorsement of any specific product, neither do they constitute a recommendation for any specific action or policy. The Hackwell Group and those who work for it accept no responsibility for any loss or damage should any occur as a result of any action taken that could be attributed to or reliant upon the contents of the report.