

MATERIALS TECHNOLOGY

PUBLICATIONS

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● GLASS FIBRE REINFORCED PLASTICS ● CARBON FIBRE REINFORCED PLASTICS ●

EUROPEAN COMPOSITES DIRECTORY AND REPORT 2002-2003

● ARAMID FIBRE REINFORCED PLASTICS ● HYBRID COMPOSITES ● LAMINATES ●

ISBN 1 871677 41 6 (Published March 2002)

The directory lists a wide range of commercially available products, including:

- **GLASS FIBRE REINFORCED PLASTICS** - Information on commercially available glass fibre reinforced plastics for use in a wide variety of industries
- **CARBON FIBRE REINFORCED PLASTICS** - Find out who supplies high performance carbon fibre composites in Europe
- **ARAMID FIBRE REINFORCED PLASTICS** - Information on European suppliers of aramid fibre reinforced plastics for high strength applications
- **OTHER PLASTIC FIBRE REINFORCED COMPOSITES** - Details of new types of advanced plastic composites using such high performance reinforcements as high density polyethylene
- **HYBRID COMPOSITES** - Composites with one or more type of matrix or reinforcement fibre
- **NATURAL FIBRE REINFORCED PLASTICS** - Plastics reinforced with natural fibres, such as flax
- **MATERIALS** - Cores, prepregs, reinforcements, resins, gel-coats, etc.
- **APPLICATIONS** - The directory also lists composite suppliers by end-user markets. A complete range of applications is listed, including aerospace, automotive, consumer goods, defence, electronics, infrastructure, marine, medical, railway, sports goods and telecommunications
- **SERVICES** - Find out who offers the services required by the composites industry, whether it is contract moulding, prototyping, CAD/CAM, hand lay-up, compression moulding services, product design or repair

AVAILABLE NOW - The first edition of the **EUROPEAN COMPOSITES DIRECTORY AND REPORT**.

The directory provides comprehensive information on **OVER 1500 EUROPEAN COMPANIES** (and multinational companies with European offices) that manufacture and/or supply reinforced plastics, as well as manufacturers/suppliers of materials and equipment for the manufacture of composites. Most of the information included has been supplied by the companies directly, by way of returned entry forms.

Over 250 pages long, the directory is an invaluable up-to-date guide on the European composites industry, providing full contact details for individual company entries, as well as detailed information on the products and services they offer. Additional information includes listings of company internet sites, tradenames, employee numbers, etc.

In addition, the publication includes a **MARKET REPORT** on the current state of the composites industry and its future prospects. The report also details the key companies in this dynamic market, and information on expanding end-user markets such as wind energy.

The European Composites Directory and Report 2002-2003 has four main sections:

- **COMPANY A-Z SECTION:** This section provides detailed and clearly presented information on more than 1500 companies. Full details are given, including address, telephone and facsimile numbers, e-mail address, internet address and contact name(s), parent and subsidiary companies, annual turnover, tradenames, products offered, etc.
- **CROSS-REFERENCE SECTION:** Lists companies by the products and services they offer, under seven sections: 1) Materials; 2) Ancillary Products; 3) Equipment; 4) Composite Products; 5) Processing Methods; 6) Services; 7) Applications
- **THE COMPOSITES INDUSTRY - A MARKET OVERVIEW:** An in-depth study (with tables) providing information on the composites industry, its key companies and main end-user sectors. Written by an industrial consultant
- **COMPOSITES ASSOCIATIONS:** A listing of composites associations around the world, including full contact details

SELECTION OF COMPOSITE MATERIALS AND PROCESSES COVERED

MATERIALS:

ADDITIVES / CHEMICALS
ADHESIVES
COATINGS
CORES
FILLERS
GEL-COATS
PREFORMS
PREPREGS
REINFORCEMENTS
RESINS

Note: The categories in the above section are further sub-categorised, e.g. Reinforcements; glass fibre - e-glass, chopped fibre, continuous fibre mat, rovings, yarns, etc)

FINISHED / SEMI-FINISHED COMPOSITE PRODUCTS:

ANTENNAS; ARMOUR
BATHS; BEAMS; BEARINGS; BLOCKS; BRAKES; BULK MOULDING COMPOUNDS (BMCs); BUMPERS
CASES; COLUMNS; CONES; COWLINGS; COVERS
DECKING; DOMES; DUCTS
FAIRINGS; FINS; FRAMES (airframes, automobile frames, bicycle frames, window/door frames)
GASKETS; GEARS; GRATINGS; GRIDS; GUTTERS
HULLS
LAMINATES
MASTS
PANELS; PIPES; PRESSURE VESSELS; PROFILES; PROPELLERS; PROSTHETICS
RADOMES; RAILS; RODS; ROTOR BLADES
SANDWICH PANELS / PARTS; SEATS / SEAT PARTS; SHEET MOULDING COMPOUNDS (SMCs); SHEETS; SILOS; SINKS; SLABS; SPECIAL PARTS (high temperature resistant, chemical/corrosion resistant, EMI/RFI resistant, frost resistant, humidity resistant, sound insulation, self-lubricating, wear/abrasion resistant); SPORTS GOODS (tennis racquets, golf club shafts, skis/ski boards, sports shoes); STRUTS; SWIMMING POOLS
TANKS; TANKERS; TOWERS; TUBES; TRAYS
WIND TURBINE BLADES; WINGS

PROCESSING METHODS:

AUTOCLAVING
BLOW MOULDING
COMPRESSION MOULDING
CONTACT MOULDING
CONTINUOUS FILAMENT WINDING
EXTRUSION MOULDING
GEL COATING
HAND LAY-UP
HIGH PRESSURE MOULDING
INJECTION MOULDING
LOW PRESSURE MOULDING
PULTRUSION
REACTION INJECTION MOULDING (RIM)
RESIN TRANSFER MOULDING (RTM)
SCRIMP
SPRAY-UP
THERMOFORMING
VACUUM BAG MOULDING

SOME OF THE +1500 COMPANIES LISTED IN THE DIRECTORY

- ◆ AC.S Advanced Composite Systems, Additek SA, Advanced Composites Group Ltd, Advanced Glassfiber Yarns, Advanced Lightweight Engineering BV, Aerospace Composite Technologies Ltd, Aerovac Systems Ltd, Ahlstrom Glassfibre Oy, Akzo Nobel Polymer Chemicals BV, Amber Composites Ltd, Ashland Composite Polymers
- ◆ Baltek, Bekaert Composites, W B Bijl Profielen BV, Bond Laminates GmbH, BP Amoco, Bretagne Composite, British Mica Co Ltd, Brookhouse Composites Ltd, Büsing & Fasch GmbH & Co, BYK Chemie
- ◆ C2 Composites, Cam Elyaf Sanayii AS, Camattini SpA, Cannon, Carbon Compositi Srl, Carbospars Ltd, Carr Reinforcements Ltd, Cato Composites, Cellbond Composites Ltd, Chevron Philipps Chemical Co, Clariant GmbH, Cobham Composites Ltd, Componeering Inc, Composite Dynamics Ltd, Composite Profiles Ltd, Composites Aquitaine, Composites 3D, Compreforme SA, Cray Valley, Creative Pultrusions, Critt Matériaux, Cytec Fiberite
- ◆ Dassault Aviation, DERA, Derenid, Designer Composites Technology, L Destouches Sarl, DSM Composite Resins
- ◆ E & F Fibreglass Products Ltd, EBO Systems, EM Fibreglas A/S, EMS-Chemie AG, Epsilon Composite, Euroresin
- ◆ Ferro Plastics Europe, Fiberdur, Fibergrate Composite Structures Ltd, Fiberline Composites A/S, Fibracon Twin Ltd, Fibreforce Composites, Fibrereel Pultrusions
- ◆ Garlway, Genesis Composites Ltd, GFM GmbH, Glasfiber & Plastprodukt AB, Glassfibre Services Ltd, Grafil Inc
- ◆ Hampson Composites Ltd, Hautes Performances Composite, Havel Carbon and Kevlar Composites, Hepworth Composites, Hexagon Composites ASA, Hexcel Composites, Hollingsworth & Vose Co
- ◆ IGP Pulvertechnik AG, Imagineering, Imhotep Ltd, Interglas, Isola Composites Ltd, Isovolta, Issoire Aviation
- ◆ Johns Manville, Johnston Pipes, Jones Stroud Insulations Ltd
- ◆ Kompozitor Plastics Developing Co Ltd, Krauss-Maffei, Fa E Kühne Kunststoffwerk GmbH & Co, Fa Kümpers GmbH & Co
- ◆ Laminated Profiles Ltd, Laminer SC, Laminopol sp z.oo, Lantor BV, Llewellyn Ryland Ltd, Lonza Compounds
- ◆ Material SA, Matrasur Composites, MBS Composites, Menzolit, Mitras Composites Systems GmbH, MOC Composites SA, Monofiber A/S, MSP-Maunsell
- ◆ Neufarm Composites GmbH & Co KG, Newmet Composites Ltd, Nidaplast Honeycombs, Nioglas SL, Nordic Composites AB
- ◆ Ollearis SA, Owens Corning
- ◆ Parabeam BV, Parton Fibreglass Ltd, Permali Composites SA, Permali Gloucester Ltd, Peroxid-Chemie, PGI/Nordlys, Plastech RTM Systems BV, Plasticon Europe, Poliya Polyester, Polyamarin BV, Polymeric Composites Ltd, PPG
- ◆ Rawlson Ltd, Readings Composites Ltd, Reichhold, Resine Italiane Srl, Röchling Haren KG, Rotec Composite Group, Rotteleur Composite, RTM Composites
- ◆ Sabca Limburg NV, Saertex Wagener GmbH & Co KG, Saint-Gobain Vetrotex, Scandinavian Glass Fiber AB, Schappe Techniques, Schlösser & Cramer KG, Scott Bader Co Ltd, Seal SpA, SGL Carbon Group, Sicomp AB, Sigma Composite, Sika, SIR Industriale SpA, Skloplast AS, Soficar SA, Solvay, Sotira, SP Systems, Structil
- ◆ Technical Fibre Products Ltd, TED Composite GmbH, Ten Cate Advanced Composites BV, Tenax Fibers GmbH & Co KG, Tenmat Ltd, Terma Industries Grenaa AS, Terruzzi Cristoforo Srl, Texkimp Ltd, Ticona UK, Tissa Glasweberei AG, Top Glass SpA, Toray Europe, Touraine Composite, Tradex Colori, Tri-Cast Composite Tubes Ltd, Trival Kompoziti, Tubus Bauer AG, Tufnol Ltd, Twaron Products GmbH, Tygavac Advanced Materials Ltd
- ◆ Ullit, U-Pol
- ◆ Valmieras Stikla Skiedra, Vantico, Vello Nordic AS, Viapol
- ◆ Wela Handelsgesellschaft mbH, Woolmer Forest Composites, Worlee Chemie GmbH
- ◆ Yatlantico SL
- ◆ Zeon France SA, Zodiac SA, Zoltek Europe GmbH
- ◆ FULL CONTACT INFORMATION GIVEN

CONTENTS OF THE DIRECTORY / REPORT

INTRODUCTION

THE COMPOSITES INDUSTRY - A MARKET OVERVIEW

(an analysis of the composites industry worldwide, its key companies and its future prospects, with tables)

- Introduction
- Company information
- Matrix materials
- Reinforcement materials
- Production methods
- End-use sectors
- Conclusion

(Tables include: "US composites industry shipments by application, 1998-2001", "Production of composites in Europe in 2000"; and "Capacity for commercial and aerospace grade carbon fibres in 2000")

A-Z LISTING OF COMPANIES

(an up-to-date listing of over 1500 companies across Europe, supplying composite products and raw materials/equipment. Full contact details and product ranges are given - see back page for examples)

COMPOSITES ASSOCIATIONS

(a listing of composites associations worldwide)

CROSS-REFERENCE SECTION

(listings of companies by their products and services)

- Materials
- Ancillary Products
- Equipment
- Composite Products
- Processing Methods
- Services
- Applications

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SAMPLE ENTRIES FROM THE DIRECTORY (over 1500 entries in total)

A C E CONTRACTORS A/S

Håndvaerkervej 24, DK-7000 Fredericia, Denmark

Tel: +45 76 24 18 00 Fax: +45 76 24 18 19

E-mail: ace@email.dk Internet: www.ace-con.dk

Parent Company: Inometa, Germany

Sales Offices: Denmark

Export Countries / Regions: Europe, USA

Annual Turnover: DKK 2 million

Number of Employees: 20 Year Founded: 1993

Type of Company: Manufacturer

Activities: Manufacture of advanced composites, mainly carbon fibre based for aerospace (e.g. struts)

PRODUCTS / SERVICES: Composite products (carbon fibre reinforced, glass fibre reinforced; antennas, beams, masts, pipes, struts, tubes); Processing methods (filament winding); Services (cutting/machining, filament winding); Applications (aerospace, electrical/electronic, industrial/engineering)

COMPOSITES AQUITAINE

19 route de Lacanau, F-33160 Salaunes, France

Tel: +33 5 56 68 55 00 Fax: +33 5 56 58 51 93

E-mail: info@composites-aquitaine.com

Internet: www.composites-aquitaine.com

Contact: Jean-Louis Zulian

Parent Company: EADS-Sogerma, France

Sales Offices: France

Annual Turnover: €24.5 million

Number of Employees: 280 Year Founded: 1984

Standards / Accreditation: ISO 9001

Type of Company: Manufacturer

Activities: Manufacture of composite parts by draping preimpregnated fabrics, filament winding and resin transfer moulding

PRODUCTS / SERVICES: Composite products (carbon fibre reinforced, glass fibre reinforced); Processing methods (autoclaving, filament winding, gel coating, hand lay-up, resin transfer moulding, vacuum assisted resin transfer moulding, vacuum forming); Applications (aerospace, automotive, buses/trams, defence, electrical/electronic, industrial/engineering, offshore oil and gas systems, railway, safety, sports goods)

COMTEC - COMPOSITE RESEARCH AND DEVELOPMENT LTD

Feldchen 8, D-52070 Aachen, Germany

Tel: +49 241 91896 0 Fax: +49 241 9189670

E-mail: frp@comtec-ac.com Internet: www.comtec-ac.com

Contact: Hubert Schneider

Year Founded: 1981

Type of Company: Service provider

Activities: Development of components made from fibre reinforced plastics; design and manufacture of full-scale special production facilities. In addition to testing machines for forces up to and including 500 kN (height of specimen up to 2.5 m), various devices for long-term testing as well as a temperature chamber for tests up to 200°C are available. Also offers project management, and expertise in national and international standards

PRODUCTS / SERVICES: Services (CAD/CAM/CAE design, civil engineering, filament winding, hand lay-up, materials analysis, plant design, product design, product testing, prototyping)

ELLIS DEVELOPMENTS LTD

68 Carlton Road, Nottingham NG3 2AP, UK

Tel: +44 115 958 8878 Fax: +44 115 911 0119

E-mail: info@ellisdevelopments.co.uk

Internet: www.ellisdevelopments.co.uk

Contact: Julian Ellis, Peter Butcher

Year Founded: 1985

Type of Company: Manufacturer

Activities: Research and development of textile reinforcements, including Z-axis reinforcement, and CAD/CAM fibre placement methods

PRODUCTS / SERVICES: Preforms (aramid, carbon, ceramic, glass fibre, graphite, quartz, hybrid); Services (fibre placement)

F T S SRL (FIBRE E TESSUTI SPECIALI)

Via Bertalazzone 1, I-10077 San Maurizio (Canavese), Italy

Tel: +39 011 927 5485 Fax: +39 011 927 9135

E-mail: fts@ozella.it Internet: www.fibreteessutispeciali.it

Contact: Luca Mezzo, Andrea Gaio

Parent Company: Stabilimenti Tessili Ozella SpA, Italy

Sales Offices: Italy

Export Countries / Regions: Czech Republic, France, Germany, Greece, The Netherlands, Spain, Switzerland, UK

Annual Turnover: €2.6 million

Standards / Accreditation: ISO 9002

Product Tradenames: Betontex

Type of Company: Manufacturer

Activities: Production of fabrics in carbon, aramid, glass and hybrid fibres for applications in aeronautic, industry and ballistic protection fields. Project assistance and development of new products

PRODUCTS / SERVICES: Prepregs; Reinforcements (glass fibre - woven fabric, yarn; aramid fibre, carbon fibre, hybrid fibres)

HEXAGON COMPOSITES ASA

Korsegata 8, PO Box 836, Sentrum, N-6001 Alesund, Norway

Tel: +47 70 11 64 45 Fax: +47 70 11 64 40

Contact: Adne Grodem (Managing Director)

Internet: www.hexagon.no

Number of Employees: 76

Product Tradenames: Comrod, Compipe, Compolite

Type of Company: Manufacturer

Activities: Development, manufacture and marketing of composites, especially for pipeline technology.

PRODUCTS / SERVICES: Composite products (glass fibre reinforced); Processing methods (compression moulding, filament winding, hand lay-up, pultrusion, spray-up); Applications (agriculture, chemical industry, construction/building, defence, electrical/electronic, industrial/engineering, infrastructure/civil engineering, marine, offshore oil and gas, railway, sports goods, waterworks/sewage works)

NEUFORM COMPOSITES GMBH & CO KG

Ameke 63, D-48317 Drensteinfurt, Germany

Tel: +49 2387 94026 Fax: +49 2387 94028

E-mail: info@neuform-composites.de

Internet: www.neuform-composites.de

Contact: Björn Riedesel

Type of Company: Manufacturer

Activities: Technical parts made of fibre reinforced plastics, particularly propellers for light aircrafts

PRODUCTS / SERVICES: Composite products (aramid fibre reinforced, carbon fibre reinforced, glass fibre reinforced; aircraft propellers); Processing methods (gel coating, hand lay-up, injection moulding); Services (CAD/CAM/CAE design, laminating, mould and pattern making); Applications (aerospace, automotive, industrial/engineering)

SKLOPLAST AS

Strojarenská 1, SK-91799 Trnava, Slovakia

Tel: +421 805 5533155 Fax: +421 805 5533171

Contact: E Polešensky (President), I Duffek (Sales Director)

Parent Company: Johns Manville, USA

Annual Turnover: \$60 million

Number of Employees: 1200 Year Founded: 1966

Standards / Accreditation: ISO 9001

Type of Company: Manufacturer

Activities: Glass fibre rovings, fleece and chopped strands for SMC/BMC and thermoplastics, etc.

PRODUCTS / SERVICES: Reinforcements (glass fibre - e-glass, chopped fibre, chopped fibre mat, rovings, tissue)