Worldwide Carbon Fiber Competitive Analysis and Leadership Study 2016

Published: February 2016

Competitive analysis and leadership study based on the following criteria - company overview (company description and business segments, company statistics), carbon fiber business overview (carbon fiber business segments, global carbon fiber operations, key differentiators and strengths), products and product positioning (product line overview, product mapping, product positioning in market segments), production (global manufacturing operations), and financial condition

Table of Content

Table of Contents

- 1. Competitive and Leadership Analysis
 - 1.1: Introduction
 - 1.2: Competitive Analysis
 - 1.2.1: Product Mapping: Width and Breadth of Product Offerings
 - 1.2.2: Industry Leaders in Terms of Market Share
 - 1.3: Financial Strength
 - 1.4: Regional Reach
 - 1.5: Trend
 - 1.6: Leadership Quadrant Analysis
 - 1.6.1: Leaders (Top Right)
 - 1.6.2: Challengers (Bottom Right)
 - 1.6.3: Visionaries (Top Left)
 - 1.6.4: Niche Players (Lower Left)

2. Cytec Profile

- 2.1: Company Overview
 - 2.1.1: Cytec Company Description and Business Segments
 - 2.1.2: Cytec Company Statistics
- 2.2: Carbon Fiber Business Overview
 - 2.2.1: Carbon Fiber Business Segment
 - 2.2.2: Global Carbon Fiber Operations
 - 2.2.3: Key Differentiators and Strengths
 - 2.2.4: Key Carbon Fiber Competitors
- 2.3: Products and Product Positioning
 - 2.3.1: Product Line Overview
 - 2.3.2: Carbon Fiber Product Mapping
 - 2.3.3: Product Positioning in Market Segments
- 2.4: Markets and Market Positioning
 - 2.4.1: Market Position in Global Carbon Fiber Business
- 2.5: Revenue Breakdown by Market Segments
- 2.6: Revenue Breakdown by Regions
- 2.7: Production
 - 2.7.1: Cytec Global Manufacturing Operations
 - 2.7.2: Current and Forecast Production Capacities

- 2.8: Innovation and Market Leadership
- 2.9: Marketing, Sales, and Organizational Capabilities
 - 2.9.1: Marketing and Sales
 - 2.9.2: Management Commitment and Track Record
- 2.10: Financial Strength

3. Hexcel Profile

- 3.1: Company Overview
 - 3.1.1: Hexcel Company Description and Business Segments
 - 3.1.2: Hexcel Company Statistics
- 3.2: Carbon Fiber Business Overview
 - 3.2.1: Carbon Fiber Business Segment
 - 3.2.2: Global Operations in Carbon Fiber
 - 3.2.3: Key Differentiators and Strengths
 - 3.2.4: Key Carbon Fiber Competitors
- 3.3: Products and Product Positioning
 - 3.3.1: Product Line Overview
 - 3.3.2: Carbon Fiber Product Mapping
 - 3.3.3: Product Positioning in Market Segments
- 3.4: Markets and Market Positioning
 - 3.4.1: Market Position in Global Carbon Fiber Business
 - 3.4.2: Revenue Breakdown by Market Segments
 - 3.4.3: Revenue Breakdown by Regions
- 3.5: Production
 - 3.5.1: Hexcel Global Manufacturing Operations
 - 3.5.2: Current and Forecast Production Capacities
- 3.6: Innovation and Market Leadership
- 3.7: Marketing, Sales, and Organizational Capabilities
 - 3.7.1: Marketing and Sales
 - 3.7.2: Management Commitment and Track Record
- 3.8: Financial Strength

4. MCH Profile

- 4.1: Company Overview
 - 4.1.1: Mitsubishi Chemical Holding Company (MCH) Description and Business Segments
 - 4.1.2: Mitsubishi Chemical Holding Statistics
- 4.2: Carbon Fiber Business Overview
 - 4.2.1: Carbon Fiber Business Segment
 - 4.2.2: Global Carbon Fiber Operations
 - 4.2.3: Key Differentiators and Strengths
 - 4.2.4: Key Carbon Fiber Competitors
- 4.3: Products and Product Positioning
 - 4.3.1: Product Line Overview
 - 4.3.2: Product Mapping
 - 4.3.3: Product Positioning in Market Segments
- 4.4: Markets and Market Positioning
 - 4.4.1: Market Position in Global Carbon Fiber Business
 - 4.4.2: Revenue Breakdown by Market Segments

4.4.3: Revenue Breakdown by Regions

- 4.5: Production
 - 4.5.1: MRC Global Manufacturing Operations
- 4.6: Current and Forecast Production Capacities
- 4.7: Innovation and Market Leadership
- 4.8: Marketing, Sales, and Organizational Capabilities
 - 4.8.1: Marketing and Sales
 - 4.8.2: Management Commitment and Track Record
- 4.9: Financial Strength

5. SGL Profile

- 5.1: Company Overview
 - 5.1.1: SGL Group The Carbon Company Description and Business Segments
 - 5.1.2: SGL Group Statistics
- 5.2: Carbon Fiber Business Overview
 - 5.2.1: Carbon Fiber Business Segment
 - 5.2.2: Global Carbon Fiber Operations
 - 5.2.3: Key Differentiators and Strengths
 - 5.2.4: Key Carbon Fiber Competitors
- 5.3: Products and Product Positioning
 - 5.3.1: Product Line Overview
 - 5.3.2: Carbon Fiber Product Mapping
 - 5.3.3: Product Positioning in Market Segments
- 5.4: Markets and Market Positioning
 - 5.4.1: Market Position in Global Carbon Fiber Business
 - 5.4.2: Revenue Breakdown by Market Segments
 - 5.4.3: Revenue Breakdown by Regions
- 5.5: Production
 - 5.5.1: SGL Carbon AG Global Manufacturing Operations
 - 5.5.2: Current and Forecast Production Capacities
- 5.6: Innovation and Market Leadership
- 5.7: Marketing, Sales, and Organizational Capabilities
 - 5.7.1: Marketing and Sales
 - 5.7.2: Management Commitment and Track Record
- 5.8: Financial Strength

6. Teijin Profile

- 6.1: Company Overview
 - 6.1.1: Company Description and Business Segments
 - 6.1.2: Company Statistics
- 6.2: Carbon Fiber Business Overview
 - 6.2.1: Teijin Carbon Fiber Business Segment
 - 6.2.2: Teijin Global Operations in Carbon Fiber
 - 6.2.3: Key Differentiators and Strengths
 - 6.2.4: Key Carbon Fiber Competitors
- 6.3: Products and Product Positioning
 - 6.3.1: Product Line Overview
 - 6.3.2: Carbon Fiber Product Map

- 6.3.3: Product Categories
- 6.3.4: Product Positioning in Market Segments
- 6.4: Markets and Market Positioning
 - 6.4.1: Market Position in Global Carbon Fiber Business
 - 6.4.2: Revenue Breakdown by Market Segments
 - 6.4.3: Revenue Breakdown by Regions
- 6.5: Production
 - 6.5.1: Global Manufacturing Operations
 - 6.5.2: Current and Forecast Production Capacities
- 6.6: Marketing, Sales, and Organizational Capabilities
 - 6.6.1: Marketing and Sales
- 6.7: Innovation and Market Leadership
- 6.8: Financial Strength

7. Toray Profile

- 7.1: Company Overview
 - 7.1.1: Toray Industries Inc. Description and Business Segments
 - 7.1.2: Toray Industries Inc. Statistics
- 7.2: Carbon Fiber Business Overview
 - 7.2.1: Carbon Fiber Business Segment
 - 7.2.2: Global Carbon Fiber Operations
 - 7.2.3: Key Differentiators and Strengths
 - 7.2.4: Key Carbon Fiber Competitors
- 7.3: Products and Product Positioning
 - 7.3.1: Product Line Overview
 - 7.3.2: Carbon Fiber Product Mapping
 - 7.3.3: Product Positioning in Market Segments
- 7.4: Markets and Market Positioning
 - 7.4.1: Market Position in Global Carbon Fiber Business
 - 7.4.2: Revenue Breakdown by Market Segments
 - 7.4.3: Revenue Breakdown by Regions
- 7.5: Production
 - 7.5.1: Toray Industries Global Manufacturing Operations
 - 7.5.2: Current and Forecast Production Capacities
- 7.6: Innovation and Market Leadership
- 7.7: Marketing, Sales, and Organizational Capabilities
 - 7.7.1: Marketing and Sales
 - 7.7.2: Management Commitment and Track Record
- 7.8: Financial Strength

List of Figures

1. Competitive and Leadership Analysis

- Figure 1.1: Schematic Representation of Carbon Fiber Preparation from PAN Fibers
- Figure 1.2: Industry-Wide Carbon Fiber Product Map
- Figure 1.3: Carbon Fiber Manufacturers' Global Market Share in 2015
- Figure 1.4: Total Revenue Trend for Major Carbon Fiber Suppliers
- Figure 1.5: Total Operating Income for Major Carbon Fiber Suppliers

- Figure 1.6: Total Net Income Trend for Major Carbon Fiber Suppliers
- Figure 1.7: Carbon Fiber Manufacturers' Market Share in Industrial Market in 2015
- Figure 1.8: Carbon Fiber Manufacturers' Market Share in Sporting Goods Market in 2015
- Figure 1.9: Carbon Fiber Manufacturers' Market Share in Aerospace Market in 2015
- Figure 1.10: Total Market vs. Capacity Growth by Company (Capacity) during 2012-2016
- Figure 1.11: Carbon Fiber Manufacturers' Market Share in North America in 2015
- Figure 1.12: Carbon Fiber Manufacturers' Market Share in Europe in 2015
- Figure 1.13: Carbon Fiber Manufacturers' Market Share in Asia and Others in 2015
- Figure 1.14: Relative Positions of Each Carbon Fiber Manufacturer in Four Quadrants

2. Cytec Profile

- Figure 2.1: Cytec's Carbon Fiber Manufacturing Locations
- Figure 2.2: Carbon Fibers and Industry Applications
- Figure 2.3: Cytec's Carbon Fiber Product Map
- Figure 2.4: Cytec's Carbon Fiber Revenue and Industry Market Share in 2010
- Figure 2.5: Cytec's Carbon Fiber Revenue and Industry Market Share in 2015
- Figure 2.6: Cytec's Carbon Fiber Shipments and Industry Market Share in 2010
- Figure 2.7: Cytec's Carbon Fiber Shipments and Industry Market Share in 2015
- Figure 2.8: Cytec's Carbon Fiber Revenues by Market Segment in 2015
- Figure 2.9: Cytec's Share of Market Segment Revenues in 2015
- Figure 2.10: Cytec's PAN Carbon Fiber Sales by Region in 2015
- Figure 2.11: Cytec's Carbon Fiber Manufacturing Locations
- Figure 2.12: Cytec's Production Capacity by Region and Year
- Figure 2.13: Cytec's Share of Production Capacity by Region and Year
- Figure 2.14: Cytec's Revenue, Operating Income, and Net Income Trends

3. Hexcel Profile

- Figure 3.1: Hexcel Carbon Fiber Manufacturing Locations
- Figure 3.2: Various Forms of Carbon Fibers and Composite Materials
- Figure 3.3: Hexcel's Carbon Fiber Product Map
- Figure 3.4: Hexcel's Carbon Fiber Revenues and Industry Market Share in 2010
- Figure 3.5: Hexcel's Carbon Fiber Revenues and Industry Market Share in 2015
- Figure 3.6: Hexcel's Carbon Fiber Shipments and Industry Market Share in 2010
- Figure 3.7: Hexcel's Carbon Fiber Shipments and Industry Market Share in 2015
- Figure 3.8: Hexcel's Revenues by Market Segment
- Figure 3.9: Hexcel's Share of Market Segment Revenues
- Figure 3.10: Hexcel's Carbon Fiber Sales by Global Regions
- Figure 3.11: Hexcel's Manufacturing Locations
- Figure 3.12: Hexcel's Production Capacity by Region and Year
- Figure 3.13: Share of Production Capacity by Region and Year
- Figure 3.14: Revenue, Operating Income, and Net Income Trend for Hexcel

4. MCH Profile

- Figure 4.1: MRC's Global Locations
- Figure 4.2: MRC's Carbon Fibers, Composite Materials, and Products
- Figure 4.3: MRC's Carbon Fiber Product Map
- Figure 4.4: Industry Carbon Fiber Product Map
- Figure 4.5: MCH's Carbon Fiber Revenues and Industry Market Share in 2010
- Figure 4.6: MCH's Carbon Fiber Revenues and Industry Market Share in 2015
- Figure 4.7: MCH's Carbon Fiber Shipments and Industry Market Share in 2010
- Figure 4.8: MCH's Carbon Fiber Shipments and Industry Market Share in 2015
- Figure 4.9: MRC's Revenue Breakdown by Market Segment
- Figure 4.10: MRC's Share of Market Segment Revenue in 2015
- Figure 4.11: MRC's Carbon Fiber Sales by Global Regions in 2015
- Figure 4.12: MRC's Manufacturing Locations
- Figure 4.13: MRC's Production Capacity by Region and Year
- Figure 4.14: MRC's Share of Production Capacity by Region and Year
- Figure 4.15: MCH's Revenue, Operating Income, and Net Income Trends

```
Figure 5.1: SGL Group Global Carbon Fiber Manufacturing Locations
```

Figure 5.2: SGL's Various Forms and Uses of Carbon Fibers

Figure 5.3: SGL's Carbon Fiber Product Map

Figure 5.4: SGL's Carbon Fiber Revenues and Industry Market Share in 2010

Figure 5.5: SGL's Carbon Fiber Revenues and Industry Market Share in 2015

Figure 5.6: SGL's Carbon Fiber Shipments and Industry Market Share in 2010

Figure 5.7: SGL's Carbon Fiber Shipments and Industry Market Share in 2015

Figure 5.8: SGL's Carbon Fiber Revenues by Market Segment in 2015

Figure 5.9: SGL's Share of Market Segment Revenue in 2015

Figure 5.10: SGL's Carbon Fiber Sales by Regions in 2015

Figure 5.11: SGL's Carbon Fiber Manufacturing Locations

Figure 5.12: SGL's Production Capacity by Region and Year

Figure 5.13: SGL's Share of Production Capacity by Region and Year

Figure 5.14: Revenue, Operating Income, and Net Income Trend for SGL Group

6. Teijin Profile

Figure 6.1: Teijin's Global Manufacturing Locations

Figure 6.2: Teijin's Various Product Forms for Carbon Fiber

Figure 6.3: Teijin's Carbon Business Unit Product Line Overview

Figure 6.4: Teijin's Carbon Fiber Product Map

Figure 6.5: Industry-Wide Carbon Fiber Product Map

Figure 6.6: Teijin's Carbon Fiber Revenues and Industry Market Share in 2010

Figure 6.7: Teijin's Carbon Fiber Revenues and Industry Market Share in 2015

Figure 6.8: Teijin's Carbon Fiber Shipments and Industry Market Share in 2010

Figure 6.9: Teijin's Carbon Fiber Shipments and Industry Market Share in 2015

Figure 6.10: Teijin's Revenues by Market Segment

Figure 6.11: Teijin's Share of Market Segment Revenue

Figure 6.12: Teijin's Carbon Fiber Sales by Global Regions

Figure 6.13: Teijin's Manufacturing Locations

Figure 6.14: Toho Tenax's Production Capacity by Region and Year

Figure 6.15: Toho Tenax's Share of Production Capacity by Region and Year

Figure 6.16: Teijin's Global Coverage

Figure 6.17: Revenue, Operating Income, and Net Income Trend for Teijin

7. Toray Profile

Figure 7.1: Toray's Manufacturing Locations

Figure 7.2: Toray's Various Forms of Carbon Fibers and Composite Materials

Figure 7.3: Toray's Carbon Fiber Product Map

Figure 7.4: Industry Carbon Fiber Product Map

Figure 7.5: Toray's Carbon Fiber Revenues and Industry Market Share in 2010

Figure 7.6: Toray's Carbon Fiber Revenues and Industry Market Share in 2015

Figure 7.7: Toray's Carbon Fiber Shipments and Industry Market Share in 2010

Figure 7.8: Toray's Carbon Fiber Shipments and Industry Market Share in 2015

Figure 7.9: Toray's Revenues by Market Segment

Figure 7.10: Toray's Share of Market Segment Revenue

Figure 7.11: Toray's Carbon Fiber Sales by Global Regions

Figure 7.12: Toray's Manufacturing Locations

Figure 7.13: Toray's Production Capacity by Region and Year

Figure 7.14: Toray's Share of Production Capacity by Region and Year

Figure 7.15: Revenue, Operating Income, and Net Income Trend for Toray

List of Tables

1. Competitive and Leadership Analysis

Table 1.1: Ranking of Carbon Fiber Suppliers Based on Number of Product Offerings

Table 1.2: Ranking of Suppliers Based on Carbon Fiber Revenue

Table 1.3: Ranking of Suppliers Based on Parent Company Revenue in 2015

Table 1.4: Ranking of Leaders in Industrial, Aerospace, and Sporting Goods Markets

Table 1.5: Ranking of Leaders in Global Carbon Fiber Market Share

Table 1.6: Major Parameters for Lucintel's Leadership Quadrant Analysis

- Table 2.1: Cytec Products by Category
- Table 2.2: Production Capacity of Carbon Fibers at Cytec
- Table 2.3: Cytec Revenues and Net Income (Loss) Trends

3. Hexcel Profile

- Table 3.1: Hexcel Magnamite® Products by Category
- Table 3.2: Hexcel Production Capacity of Carbon Fibers
- Table 3.3: Hexcel's Revenues and Net Income (Loss) Trends

4. MCH Profile

- Table 4.1: Pyrofil and Grafil Products by Category
- Table 4.2: MRC and Grafil, Inc. Production Capacity of Carbon Fibers
- Table 4.3: MCH Revenues and Net Income (Loss) Trends

5. SGL Profile

- Table 5.1: SGL SIGRAFIL-C Products by Category
- Table 5.2: Production Capacity of Carbon Fibers at SGL
- Table 5.3: SGL's Revenues and Net Income (Loss) Trends

6. Teijin Profile

- Table 6.1: Teijin's (Toho's) Products by Category
- Table 6.2: Teijin's Production Capacity of Carbon Fibers (Tons/Year)
- Table 6.3: Teijin's Revenues and Net Income (Loss) Trends

7. Toray Profile

- Table 7.1: Toray's Products by Category
- Table 7.2: Toray's Production Capacity of Carbon Fibers (Metric Tons)
- Table 7.3: Toray's Revenues and Net Income (Loss) Trends