

Y-1683 Manufacturing of Composite Materials-Carbon Fiber Composites and Glass Fiber Composites Investment Opportunities for Entrepreneurs to Start Own Business

www.entrepreneurindia.co





Introduction

A composite material consists of a minimum of two materials, which combine to offer properties superior to those of the individual constituents. A composite material (also called a composition material or shortened to composite, which is that the common name) may be a material which is produced from two or more constituent materials. These constituent materials have notably dissimilar chemical or physical properties and are merged to make a material with properties unlike the individual elements. Within the finished structure, the individual elements remain separate and distinct, distinguishing composites from mixtures and solid solutions. **Related Project: - Composite Materials-Carbon Fibre Composites & Glass Fibre Composites**



Typical Engineered Composite Materials Include:

- Reinforced concrete and masonry
- Composite wood such as plywood
- Reinforced plastics, such as Fibre-reinforced polymer or fiberglass
- Ceramic matrix composites (composite ceramic and metal matrices)
- Metal matrix composites
- Other advanced composite materials
- There are various reasons where new material can be flavoured. Typical examples include materials which are less expensive, lighter or stronger when related to common materials.

Related Projects: - <u>New Projects</u>







Types of Composites

- Particulate composites
- Flake composites
- Fiber composites
- Nano composites

Related Project:- Composite Materials-Carbon Fibre Composites & Glass Fibre

Composites







<u>Classification of Certain Materials as a Composite:</u>

- 1. Combination of materials should result in significant property changes
- 2. Content of the constituent's constituents is generally more than 10 %
- 3. In general, property of one constituent is much greater (\geq 5) than the other

Related Projects:- <u>Carbon Fiber, Carbon Fiber Composites, Graphite</u> <u>Fibre and Carbon Fiber Reinforced Polymer Projects</u>



www.entrepreneurindia.co



Why Use Composites?

The primary reason composite materials are chosen for components is because of weight saving for its relative stiffness and strength. For example, carbon-fibre reinforced composite can be five times stronger than 1020 grade steel while having only one fifth of the weight. Aluminium (6061 grade) is much nearer in weight to carbon-Fibre composite, though still somewhat heavier, but the composite can have twice the modulus and up to seven times the strength.

Related Videos:- <u>Carbon Fiber, Carbon Fiber Composites, Graphite</u> <u>Fibre and Carbon Fiber Reinforced Polymer Projects</u>







<u>Where are Composites Used</u>

Today thermoset composites are used in a wide range of industries including:

Aerospace

Thermoset composites are being specified for wings, fuselages, bulkheads, and other applications in commercial, civilian and military aerospace applications.

Appliance/Business

Thermoset composite are being used in frames, equipment panels, handles and trims in appliances, power tools, business equipment and many other applications. Thermoset composites for the appliance industry are used in washers, dryers, refrigerators, freezers, ranges, ovens, dishwashers for components that include control panels, handles, knobs, vent trims, side trims, motor housings, kick plates and many others. **Related Project:-** Composite Materials-Carbon Fibre Composites &

Related Project:- <u>Composite Materials-Carbon Fibre Composites &</u> <u>Glass Fibre Composites</u>



Automotive/Transportation/Farm/Construction

Composites are now being used in vehicle and equipment applications, including, panels, frames, interior components and other parts.

Civil Infrastructure

Some composite infrastructure applications include buildings, roads, bridges and pilings.

Construction

Thermoset composites are replacing many traditional materials for home and offices architectural components including fixtures, doors, wall panels, roofing, window frames, moulding, vanity sinks, shower stalls and even swimming pools.

Corrosive Environments.

Projects: - **<u>Project Reports & Profiles</u>**



Composites are ideal for applications in corrosive environments, such as chemical processing plants, pulp and paper converting, oil and gas refineries and water treatment facilities. Common applications include fans, grating, tanks, ducts, hoods, pumps and cabinets.

Electrical

With strong dielectric properties including arc and track resistance, Thermoset components include substation equipment, microwave antennas, standoffs and pole line hardware and printed wiring boards. Applications and components include switchgear, motor controls, standoff insulators, control system components, circuit breakers, arc chutes, arc shields, terminal blocks, terminal boards, metering devices, bus supports and lighting components.

Books:- BOOKS & DATABASES



Marine

With their corrosion resistance and light-weighting attributes, Marine composite applications include boat hulls, bulkheads and other components for military, commercial and recreational boats and ships. Related Project:- Composite Materials-Carbon Fibre Composites & Glass Fibre Composites







The Composites Market Can Be Divided Into The Following

Industry Categories:

- 1. Aerospace,
- 2. automotive,
- 3. Construction,
- 4. Marine,
- 5. Corrosion resistant equipment,
- 6. Consumer products, appliance/business equipment
- 7. Others. The range of materials can be classified into the categories: (2)
- Metals, Polymers, Ceramics and Inorganic glasses and Composites.

Market Research: - <u>Market Research Report</u>









Composite Applications Sectors

- ➢ Aerospace
- Automotive & Road Transportation
- Building & Civil Engineering
- Defence, Security & Ballistics
- Design, Furniture and Home
- Electrical, Electronics, Telecoms & Appliances
- Equipment and Machinery
- Marine transportation & Shipbuilding
- Medical & Prosthetics
- ≻ Oil & Gas
- Other Composite End-use areas
- Pipe & Tanks, Water treatment and sewage
- Railway Vehicles & Infrastructure
- Renewable Energy
- Sports, Leisure & Recreation

Projects: - Project Reports & Profiles



Market Outlook

The global composites market size is projected to grow from USD 74.0 billion in 2020 to USD 112.8 billion by 2025, at a CAGR of 8.8%. The composites industry is growing due to the rise in demand for high performance materials, globally. The major factors driving the market is the increasing technological advancements in the field of material science However, high cost of composite materials is hindering the growth.

Related Project:- <u>Composite Materials-Carbon Fibre Composites & Glass Fibre</u> <u>Composites</u>



www.entrepreneurindia.co



Another major factor driving the market studied is emerging use of 3D printing with composites. North America accounts for the very best market share and is predicted to dominate the market during the forecast period. Over the past years there are variety of changes within the application areas for carbon fiber. Aerospace & defense applications have grown significantly and are now the most important consumers of carbon fiber. The increasing demand for electric vehicles in countries like China and us is additionally a serious driving factor for the demand for composite material.

Books:- BOOKS & DATABASES







Global composite materials market is expected to witness steady growth over the forecast period owing to increasing use in industries including construction, marine, pipe & tank, electrical & electronics, automobiles, and energy. Rising lightweight material demand in aerospace industry is expected to drive the market. Application industry growth including aerospace, construction, and transport is expected to further drive composite materials market demand. Superior properties of composites including corrosion resistance, low maintenance, high strength, and longevity as compared to other conventional materials such as steel and aluminum are anticipated to fuel the market growth over the next seven years.

Market Research: - Market Research Report

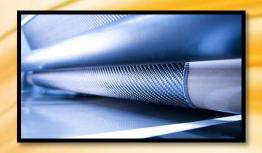
www.entrepreneurindia.co





However, uncertain raw material availability resulting in high cost is expected to hamper the market growth. Technological advancements in orthopedic surgery including prosthetics are expected to create growth opportunities over the forecast period. Growing popularity and acceptance of fiber-reinforced polymer composites in various industries including construction, marine, and wind energy owing to low maintenance costs and high durability is anticipated to propel the market demand for composite materials over the next few years.

Projects: - Project Reports & Profiles







<u>Global Composite Materials Market for Automotive: Growth</u> <u>Factors</u>

Government support for fuel efficiency and increasing demand for fuelefficient vehicles boost the global composite materials market for automotive in the near future. Major original equipment manufacturers (OEMs) are getting associated with composite material manufacturers, which is expected to boost the global market growth. Growing automotive industries also fuel the global market owing to automotive interiors such as seat covers, door panel, and steering wheel, dashboard, and so on made of composite material. Composite materials are accepted by many automotive industries for safety standards and are anticipated to show significant growth in the market in future.

Related Project:- <u>Composite Materials-Carbon Fibre Composites & Glass</u> <u>Fibre Composites</u>



Natural fiber-reinforced plastic composite is majorly preferred for automotive interiors due to varied applications such as gear knobs, flooring, seat trims, and others. However, carbon fiber-reinforced plastic (CFRP) is prominently used in the sports and luxury vehicles for automotive interiors and dashboards. It possesses high appearance and strength-to-weight ratio; this is anticipated to fuel market growth in future. Based on application, the automotive composite materials market can be divided into interior and exterior. The exterior components of the vehicle such as bonnet, side valences, bumper, chassis, and front fascia are made from composite material. Similarly, composite materials are utilized in several interior components of the vehicle such as inner deck lid, front end carrier, under the hood applications, truck box tail gate for pickup trucks, and top sleeper in trucks. **Related Project:-** <u>Composite Materials-Carbon Fibre Composites & Glass</u> Fibre Composites



Composites possess remarkable properties such as high strength, stiffness, modulus, and are proven materials for providing high crashworthiness. These properties of composite materials are expected to provide lucrative opportunities for the exterior segment in the automotive composite material market during the forecast period. Related Project:- Composite Materials-Carbon Fibre Composites & Glass Fibre Composites







Industry Trends

Carbon Fibre Composites Market size was worth over \$16 billion in 2016 and its demand is projected to cross 290 kilo tons in 2024. Increasing adoption in aerospace and automotive sectors will primarily drive the industry from 2017 to 2024. The proliferating demand from developed regions including Europe and North America will escalate the overall revenue generation. This can be credited to rising need of immediate supply of carbon Fibre, the U.S. export controls have resulted in considerable vertical integration across the globe, fostering the carbon Fibre composites market till 2024.

Projects: - Project Reports & Profiles



www.niir.org



Regular innovations have led to reduction in process and cycle time that has resulted in significant fall of overall processing cost. Increasing demand for lightweight and high-performance composites owing to stringent regulations and safety concerns will lead to huge growth potential for carbon Fibre composites market share over the next eight years. These products offer enhanced stability at extreme temperatures and durability that will further impact the industry growth positively. However, fluctuations in prices of raw materials may hamper the product demand. Increasing usage in aerospace industry for interior & exterior aircraft structures owing to their high-end performance and superior strength will increase product demand. Compliance with the mandatory environmental standards is another factor positively influencing the overall carbon fiber composites market from 2017 to 2024.

Projects: - Project Reports & Profiles



Key Players:-

- > Ahlstrom Munksjo Fibercomposites India Pvt. Ltd.
- Chevron Glassfibre Reinforcements Ltd.
- Cosmos Fibre Glass Ltd.
- Everlast Composites Pvt. Ltd.
- ➢ Goa Glass Fibre Ltd.
- > Hindoostan Technical Fabrics Ltd.
- Ineos Styrolution India Ltd.
- Jushi India Pvt. Ltd.
- Magnus Composites Synergies Pvt. Ltd.
- Owens Corning Inds. (India) Pvt. Ltd.
- ≻ Teijin India Pvt. Ltd.
- ≻ U P Twiga Fiberglass Ltd.





(npcs)





Puttrusion Line







Cooling Tower



Roving Rack



Project at a Clance

| F PROJE | СТ | MEANS OF FINANCE | | | | | | |
|----------|--|--|---|---|--|--|--|--|
| Existing | Proposed | Total | Particulars | Existing | Propose | Total | | |
| DAIoting | roposeu | Iotai | i ai ticulai b | DAIGUING | u | Total | | |
| 0.00 | 77.00 | 77.00 | Capital | 0.00 | 113.08 | 113.08 | | |
| 0.00 | 64.00 | 64.00 | Share Premium | 0.00 | 0.00 | 0.00 | | |
| | | | Other Type Share | | | | | |
| 0.00 | 114.50 | 114.50 | 5 1 | 0.00 | 0.00 | 0.00 | | |
| 0.00 | 10.00 | 10.00 | Reserves & Surplus | 0.00 | 0.00 | 0.00 | | |
| | | | | | | | | |
| 0.00 | 63.00 | 63.00 | Cash Subsidy | 0.00 | 0.00 | 0.00 | | |
| | | | Internal Cash | | | | | |
| 0.00 | 25.00 | 25.00 | Accruals | 0.00 | 0.00 | 0.00 | | |
| 0.00 | 0.00 | | 61 | 0.00 | 000.04 | | | |
| 0.00 | 0.00 | 0.00 | Borrowings | 0.00 | 339.24 | 339.24 | | |
| 0.00 | | | | 0.00 | | | | |
| 0.00 | 15.00 | 15.00 | | 0.00 | 0.00 | 0.00 | | |
| | | | | | | | | |
| 0.00 | 10.50 | 10.50 | Loans/Deposits | 0.00 | 0.00 | 0.00 | | |
| | | | | | | | | |
| | | | | | | | | |
| 0.00 | 452.32 | 452.32 | TOTAL | 0.00 | 452.32 | 452.32 | | |
| | Existing 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0. | $\begin{array}{c cccc} 0.00 & 64.00 \\ 0.00 & 114.50 \\ 0.00 & 10.00 \\ 0.00 & 63.00 \\ 0.00 & 25.00 \\ 0.00 & 0.00 \\ 0.00 & 15.00 \\ 0.00 & 10.50 \\ 0.00 & 73.32 \end{array}$ | ExistingProposedTotal0.0077.0077.000.0064.0064.000.00114.50114.500.0010.0010.000.0063.0063.000.0025.0025.000.0015.0010.000.0010.5010.500.0073.3273.32 | ExistingProposedTotalParticulars0.0077.0077.00Capital0.0064.0064.00Share Premium Other Type Share0.00114.50114.50Capital0.0010.0010.00Reserves & Surplus0.0063.0063.00Cash Subsidy Internal Cash0.0025.0025.00Accruals Long/Medium Term0.000.0015.00Debentures / Bonds Unsecured0.0010.5010.50Loans/Deposits0.0073.3273.3273.32 | Existing Proposed Total Particulars Existing 0.00 77.00 77.00 Capital 0.00 0.00 64.00 64.00 Share Premium 0.00 0.00 64.00 Share Premium 0.00 0.00 114.50 114.50 Capital 0.00 0.00 10.00 Reserves & Surplus 0.00 0.00 63.00 63.00 Cash Subsidy 0.00 0.00 63.00 25.00 Accruals 0.00 0.00 25.00 25.00 Accruals 0.00 0.00 0.00 Borrowings 0.00 0.00 0.00 15.00 Debentures / Bonds 0.00 0.00 10.50 10.50 Loans/Deposits 0.00 0.00 73.32 73.32 73.32 | ExistingProposedTotalParticularsExistingPropose d 0.00 77.0077.00Capital0.00113.08 0.00 64.00Share Premium0.000.00 0.00 64.00Share Premium0.000.00 0.00 114.50Capital0.000.00 0.00 114.50Capital0.000.00 0.00 10.00Reserves & Surplus0.000.00 0.00 63.00Cash Subsidy0.000.00 0.00 25.0025.00Accruals0.000.00 0.00 0.00Borrowings0.00339.24 0.00 15.00Debentures / Bonds0.000.00 0.00 10.50Long/Deposits0.000.00 0.00 73.3273.32 | | |



Project at a Glance

www.niir.org

| Year | Annu | alised | Book Value | Debt | Dividen d | Retained Earnings | | Payout | Probable Market Price | P/E Ratio | Yield Price/ Book Value |
|------|-------|--------|---------------|-------|--------------|----------------------|-------|--------|-----------------------------|----------------|----------------------------|
| | EPS | CEPS | Per S | Share | Per Share | Per Share | | | | No.of Times | |
| | | | - | • | ` | % | | % | ~ | | % |
| | | | | | | 100.0 | | | | | |
| 1-2 | 5.91 | 9.14 | 15.91 | 24.00 | 0.00 | 0 | 5.91 | 0.00 | 5.91 | 1.00 | 0.00 |
| | | | | | | 100.0 | | | | | |
| 2-3 | 9.27 | 12.10 | 25.17 | 18.00 | 0.00 | 0 | 9.27 | 0.00 | 9.27 | 1.00 | 0.00 |
| | | | | | | 100.0 | | | | | |
| 3-4 | 12.54 | 15.03 | 37.71 | 12.00 | 0.00 | 0 | 12.54 | 0.00 | 12.54 | 1.00 | 0.00 |
| 4- | | | | | | 100.0 | | | | | |
| 5 | 15.62 | 17.81 | 53.33 | 6.00 | 0.00 | 0 | 15.62 | 0.00 | 15.62 | 1.00 | 0.00 |
| 5- | | | | | | 100.0 | | | | | |
| 6 | 18.48 | 20.41 | 71.81 | 0.00 | 0.00 | 0 | 18.48 | 0.00 | 18.48 | 1.00 | 0.00 |
| 4 | | | | | | | | | | | |



Project at a Glance

www.niir.org

| Year | D | . S. C. R | ξ. | - | Equity as- Equity | Net | n on | Profitability Ratio | | | | Assets Turno ver Ratio | Curre nt Ratio | |
|-------------|-------------------|----------------|-------------|------|-------------------------|------|------|---------------------|-------|-------|-----------------------------|---------------------------------|----------------------|------|
| | | Cumul ative | Over all | | | | | GPM | PBT | PAT | Net Contr ibutio n | | | |
| | | | | (Num | ber of | | | | | | | | | |
| | (Number of times) | | mes) | tin | nes) | % | % | % | % | % | | % | | |
| Initi al | | | | 3.00 | 3.00 | | | | | | | | | |
| 1- | | | | | | | | | | | 615.2 | 20.8 | | |
| 2 | 1.36 | 1.36 | | 1.51 | 1.51 | 3.74 | | 7.86% | 3.31% | 2.26% | | 2% | 3.56 | 1.09 |
| 2- | | | | | | | | | | | 698.3 | 20.2 | | |
| 3 | 1.75 | 1.54 | | 0.72 | 0.72 | 2.34 | | 8.76% | 4.67% | 3.04% | 2 | 6% | 3.71 | 1.21 |
| 3- | | | | | | | | | | | 797.6 | | | |
| 4 | 2.19 | 1.74 | 2.17 | 0.32 | 0.32 | 1.55 | | 9.36% | 5.63% | 3.60% | 2 | 4% | 3.68 | 1.36 |
| | | | | | | | | | | | 896.9 | | | |
| 4-5 | 2.69 | 1.95 | | 0.11 | 0.11 | 1.09 | | 9.74% | 6.28% | 3.98% | | 3% | 3.55 | 1.52 |
| | | | | | | | | | | | 996.2 | | | |
| 5-6 | 3.26 | 2.17 | | 0.00 | 0.00 | 0.81 | | 9.98% | 6.71% | 4.24% | 1 | 3% | 3.38 | 1.88 |



Project at a Clance

| 5 |
|-----------|
| 64.32% |
| 66.52% |
| |
| 28.96% |
| 2 Years 3 |
| Months |
| 21.147 |
| |





Major Queries/Questions Answered in the Report?

- 1. What is Composite Materials Manufacturing industry?
- 2. How has the Composite Materials Manufacturing industry performed so far and how will it perform in the coming years ?
- 3. What is the Project Feasibility of Composite Materials Manufacturing Plant ?
- 4. What are the requirements of Working Capital for setting up Composite Materials Manufacturing plant ?



5. What is the structure of the Composite Materials Manufacturing Business and who are the key/major players ?

- 6. What is the total project cost for setting up Composite Materials Manufacturing Business?
- 7. What are the operating costs for setting up Composite Materials Manufacturing plant ?
- 8. What are the machinery and equipment requirements for setting up Composite Materials Manufacturing plant ?

(npcs) 0. Who are the Suppliers at

9. Who are the Suppliers and Manufacturers of Plant & Machinery for setting up Composite Materials Manufacturing plant ?

- 10. What are the requirements of raw material for setting up Composite Materials Manufacturing plant ?
- 11. Who are the Suppliers and Manufacturers of Raw materials for setting up Composite Materials Manufacturing Business?
- 12. What is the Manufacturing Process of Composite Materials ?

13. What is the total size of land required for setting up Composite Materials Manufacturing plant ?

14. What will be the income and expenditures for Composite Materials Manufacturing Business?

15. What are the Projected Balance Sheets of Composite Materials Manufacturing plant ?

16. What are the requirement of utilities and overheads for setting up Composite Materials Manufacturing plant?

17. What is the Built up Area Requirement and cost for setting up Composite Materials Manufacturing Business?

<u>www.niir.org</u>

npcs

18. What are the Personnel (Manpower) Requirements for setting up Composite Materials Manufacturing Business?

19. What are Statistics of Import & Export for Composite Materials ?

20. What is the time required to break-even of Composite Materials Manufacturing Business?

21.What is the Break-Even Analysis of Composite Materials Manufacturing plant?

22.What are the Project financials of Composite Materials Manufacturing Business?



npcs

23. What are the Profitability Ratios of Composite Materials Manufacturing Project?

24. What is the Sensitivity Analysis-Price/Volume of Composite Materials Manufacturing plant?

25. What are the Projected Pay-Back Period and IRR of Composite Materials Manufacturing plant?

26. What is the Process Flow Sheet Diagram of Composite Materials Manufacturing project?

27. What are the Market Opportunities for setting up Composite Materials Manufacturing plant?

28. What is the Market Study and Assessment for setting up Composite Materials Manufacturing Business?

29. What is the Plant Layout for setting up Composite Materials Manufacturing Business?

npc



Table of Contents
of the
Project Report

www.entrepreneurindia.co

<u>www.niir.org</u>



1.1. DISTRICT PROFILE & GEOTECHNICAL SITE CHARACTERIZATION

- 1.1.1. General
- 1.1.2. Location & Geographical Area
- 1.1.3. Physical Characteristics
- 1.1.4. Rainfall
- 1.1.5. Climate
- 1.1.6. Administration
- 1.1.7. Map
- 1.1.8. Demographics
- 1.1.9. Economy
- 1.1.10. Culture and Attitudes
- 1.1.11. Transport

2. INTRODUCTION

3. USES

- 3.1. WEIGHT REDUCTION
- 3.2. DURABILITY AND MAINTENANCE



- 3.3. ADDED FUNCTIONALITY
- 3.4. DESIGN FREEDOM

4. **APPLICATIONS**

- 4.1. CIVIL ENGINEERING
- 4.2. CARBON-FIBER MICROELECTRODES
- 4.3. SPORTS GOODS
- 4.4. OTHER APPLICATIONS
- 4.5. SANDWICH-STRUCTURED COMPOSITES

5. **PROPERTIES**

6. **B.I.S. SPECIFICATIONS**

- 6.1. IS 17306: 2019 CARBON FIBRE DETERMINATION OF DENSITY
- 6.2. IS 17308: 2019 CARBON FIBRE DESIGNATION SYSTEM FOR FILA
- 6.3. IS 5352: PART 1: 1999 (REAFFIRMED YEAR: 2019) TEXTILE -GLASS AND GLASS-POLYESTER FIBRE WOVEN TAPES - PART 1: SPECIFICATION

www.niir.org



- 6.4. IS 14856 (2000): GLASS FIBRE REINFORCED PLASTIC (GRP) PANEL TYPE DOOR SHUTTERS FOR INTERNAL USE
- 6.5. IS 5746: PART 1: 1987 (REAFFIRMED YEAR: 2019) WOVEN GLASS FIBRE FABRICS PLASTIC LAMINATES FOR AEROSPACE PURPOSES - PART 1: LOOM-STATE FABRICS

7. MARKET SURVEY

- 7.1. RECENT DEVELOPMENTS
- 7.2. KEY MARKET PLAYERS
- 7.3. INDUSTRY TRENDS
- 7.3.1. Market, By End-Use
- 7.3.2. Market, By Matrix Material
- 7.4. SUPPLIER FOCUS
- 7.4.1. Application Insights



8. EXPORT & IMPORT: ALL COUNTRIES

- 8.1. EXPORT: ALL COUNTRIES
- 8.1.1. Glass Wool/Glass Fibre
- 8.1.2. Articles of Stone/of other Mineral Substances (Incl Carbon Fiber Articles of Carbon Fiber and Peat) N.E.S.

8.2. IMPORT: ALL COUNTRIES

- 8.2.1. Glass Wool/Glass Fibre
- 8.2.2. Articles of Stone/of other Mineral Substances (Incl Carbon Fiber Articles of Carbon Fiber and Peat) N.E.S.





- 9. FINANCIALS & COMPARISON OF MAJOR INDIAN PLAYERS/COMPANIES
- 9.1. ABOUT FINANCIAL STATEMENTS OF CMIE DATABASE
- 9.2. PROFITS & APPROPRIATIONS
- 9.3. TOTAL LIABILITIES
- 9.4. TOTAL ASSETS
- 9.5. NET CASH FLOW FROM OPERATING ACTIVITIES

9.6. SECTION – I

- 9.6.1. Name of Company with Contact Details
- 9.6.2. Name of Director(S)
- 9.6.3. Plant Capacity
- 9.6.4. Location of Plant
- 9.6.5. Name of Raw Material(S) Consumed With Quantity & Cost



9.7. SECTION – II

- 9.7.1. Assets
- 9.7.2. Cash Flow
- 9.7.3. Cost as %ge of Sales
- 9.7.4. Growth in Assets & Liabilities
- 9.7.5. Growth in Income & Expenditure
- 9.7.6. Income & Expenditure
- 9.7.7. Liabilities
- 9.7.8. Liquidity Ratios
- 9.7.9. Profitability Ratio
- 9.7.10. Profits
- 9.7.11. Return Ratios
- 9.7.12. Structure of Assets & Liabilities (%)
- 9.7.13. Working Capital & Turnover Ratios



10. COMPANY PROFILE OF MAJOR PLAYERS

- 11. EXPORT & IMPORT STATISTICS OF INDIA
- 11.1. EXPORT STATISTICS ON GLASS FIBRE COMPOSITE
- 11.2. IMPORT STATISTICS ON GLASS FIBRE COMPOSITE
- 11.3. EXPORT STATISTICS ON CARBON FIBRE COMPOSITE
- 11.4. IMPORT STATISTICS ON CARBON FIBRE COMPOSITE
- **12. PRESENT MANUFACTURERS**
- **13. MANUFACTURING PROCESS**
- 14. PROCESS FLOW DIAGRAM





15. BUYER'S LIST

- 15.1. CONTACT DETAILS OF BUYER'S
- 15.2. NAME OF DIRECTOR(S)
- 15.3. CREDIT RATINGS
- 15.4. PLANT CAPACITY
- 15.5. LOCATION OF PLANT
- 15.6. COMPANY WISE CONSUMPTION DETAIL OF THE RAW MATERIALS
- **16. SUPPLIERS OF RAW MATERIAL**
- **17. SUPPLIERS OF PLANT & MACHINERY**
- **18. PHOTOGRAPHS/IMAGES FOR REFERENCES**
- 18.1. RAW MATERIAL PHOTOGRAPHS
- 18.2. MACHINERY PHOTOGRAPHS
- 18.3. PRODUCT PHOTOGRAPHS

19. PLANT LAYOUT

<u>www.niir.org</u>

Project Financials

| • | Project at a Glance | Annexure |
|---|--|----------|
| • | Assumptions for Profitability workings | 1 |
| • | Plant Economics | 2 |
| • | Production Schedule | 3 |
| • | Land & Building | 4 |
| | Factory Land & Building Site Development Expenses | |

npcs

Plant & Machinery......5

Indigenous Machineries Other Machineries (Miscellaneous, Laboratory etc.)



| • | Overheads Required Per Month and Per Annum |
|---|--|
| | Utilities & Overheads (Power, Water and Fuel Expenses etc.) |
| | Royalty and Other Charges |
| | Selling and Distribution Expenses |

- Salary and Wages9
- Turnover Per Annum10
- Share Capital.....11

Equity Capital Preference Share Capital





- Annexure 1 :: Cost of Project and Means of Finance
- Annexure 2 :: Profitability and Net Cash Accruals
- Revenue/Income/Realisation
- Expenses/Cost of Products/Services/Items
- Gross Profit
- Financial Charges
- Total Cost of Sales
- Net Profit After Taxes
- Net Cash Accruals





- Annexure 3 :: Assessment of Working Capital requirements
- Current Assets
- Gross Working Capital
- Current Liabilities
- Net Working Capital
- Working Note for Calculation of Work-in-process
- Annexure 4 :: Sources and Disposition of Funds



• Annexure 5 :: Projected Balance Sheets

- ROI (Average of Fixed Assets)
- RONW (Average of Share Capital)
- ROI (Average of Total Assets)
- Annexure 6 :: Profitability Ratios
- **D.S.C.R**
- Earnings Per Share (EPS)
- Debt Equity Ratio





• Annexure 7 :: Break-Even Analysis

- Variable Cost & Expenses
- Semi-Variable/Semi-Fixed Expenses
- Profit Volume Ratio (PVR)
- Fixed Expenses / Cost
- **B.E.P**





• Annexure 8 to 11 :: Sensitivity Analysis-Price/Volume

- Resultant N.P.B.T
- Resultant D.S.C.R
- Resultant PV Ratio
- Resultant DER
- Resultant ROI
- Resultant BEP





- Annexure 12 :: Shareholding Pattern and Stake Status
- Equity Capital
- Preference Share Capital
- Annexure 13 :: Quantitative Details-Output/Sales/Stocks
- Determined Capacity P.A of Products/Services
- Achievable Efficiency/Yield % of Products/Services/Items
- Net Usable Load/Capacity of Products/Services/Items
- Expected Sales/ Revenue/ Income of Products/ Services/ Items



- **Product wise Domestic Sales** Annexure 14 •• **Realisation**
- **Total Raw Material Cost** Annexure 15 ••
- **Raw Material Cost per unit** Annexure 16 ::
- Annexure 17 ::
- **Consumables, Store etc.** Annexure 18 •••
- Annexure 19 •••
 - **Packing Material Cost**
- **Packing Material Cost Per Unit** Annexure 20 ::



www.entrepreneurindia.co

Total Lab & ETP Chemical Cost



Employees Expenses Annexure 21 ...

::

::

•••

::

- Annexure 22 •••
- Annexure 23
- Annexure 24
- Annexure 25
- Annexure 26
- Annexure 27
- Annexure 28 •••

- **Fuel Expenses**
 - **Power/Electricity Expenses**
- **Royalty & Other Charges** ::
 - **Repairs & Maintenance Expenses**
 - **Other Manufacturing Expenses**
 - **Administration Expenses**
- **Selling Expenses**

www.niir.org



- Annexure 29 :: Depreciation Charges as per Books (Total)
- Annexure 30 :: Depreciation Charges as per Books (P & M)
- Annexure 31 :: Depreciation Charges as per IT Act WDV (Total)
- Annexure 32 :: Depreciation Charges as per IT Act WDV (P & M)
- Annexure 33 :: Interest and Repayment Term Loans
- Annexure 34 :: Tax on Profits
- Annexure 35 :: Projected Pay-Back Period and IRR



Reasons for Buying our Report:

• This report helps you to identify a profitable project for investing or diversifying into by throwing light to crucial areas like industry size, market potential of the product and reasons for investing in the product

- This report provides vital information on the product like it's characteristics and segmentation
- This report helps you market and place the product correctly by

identifying the target customer group of the product

<u>www.niir.org</u>



- This report helps you understand the viability of the project by disclosing details like machinery required, project costs and snapshot of other project financials
- The report provides a glimpse of government regulations applicable on the industry
- The report provides forecasts of key parameters which helps to anticipate the industry performance and make sound business decisions



• Our research reports broadly cover Indian markets, present analysis,

outlook and forecast for a period of five years.

- The market forecasts are developed on the basis of secondary research and are cross-validated through interactions with the industry players
- We use reliable sources of information and databases. And information from such sources is processed by us and included in the report

Scope of the Report

The report titled "Market Survey cum Detailed Techno Economic Feasibility Report on Composite Materials." provides an insight into Composite Materials market in India with focus on uses and applications, Manufacturing Process, Process Flow Sheets, Plant Layout and Project Financials of Composite Materials project. The report assesses the market sizing and growth of the Indian **Composite Materials Industry. While expanding a current** business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line. And before diversifying/venturing into any product, they wish to study the following aspects of the identified product: www.entrepreneurindia.co



- Good Present/Future Demand
- Export-Import Market Potential
- Raw Material & Manpower Availability
- Project Costs and Payback Period

We at NPCS, through our reliable expertise in the project consultancy and market research field, have demystified the situation by putting forward the emerging business opportunity in the Composite Materials sector in India along with its business prospects. Through this report we have identified Composite Materials project as a lucrative investment avenue.

www.niir.org





#CompositeMaterials #CompositeMaterials #CompositeMaterialsBusiness #CarbonFibreComposite #CarbonFibreCompositeMarket #CarbonFibreCompositeManufacturing #GlassFibreComposites #CompositeMaterialManufacturing #CompositeMaterialProduction #CompositeMaterialIndustry #CompositeMaterialInvestment #CompositeMaterialBook #SatrupCompositeMaterial #DetailedProjectReport

www.niir.org



#businessconsultant #BusinessPlan #feasibilityReport #ProjectReport #NPCS #bussinessplanshub #Startupbusiness4you #StartupBusinessPlan #startupinvestment #startup #bussinessplanshub #Startupbusiness4you #StartupBusinessPlan #startupinvestment #startup #InvestInStartups #StartupIndiaConsultants #Plan4Business #StartupPlan #InvestingCapitalForBusiness #HowToMakeYourBusinessMoreSuccessful #investorbusiness #BusinessPlanning #Startupcapital

#TechnologyTrendsForBusiness #StartupIdea #bookoftheday

<u>www.niir.org</u>



NIIR PROJECT CONSULTANCY SERVICES (NPCS) can provide Detailed Project Report on

<u>Composite Materials - Carbon Fibre Composites &</u> <u>Glass Fibre Composites</u>

See more Project Reports & Profiles BOOKS Market Research Report

www.entrepreneurindia.co

<u>www.niir.org</u>





www.entrepreneurindia.co

www.niir.org

www.entrepreneurindia.co

www.niir.org



Take a look at Niir Project Consultancy Services on #Street View https://goo.gl/VstWkd

Locate us on

Google Maps

https://goo.gl/maps/BKkUtq9gevT2

www.niir.org



OUR CLIENTS

Our inexhaustible Client list includes public-sector companies, Corporate Houses, Government undertaking, individual entrepreneurs, NRI, Foreign investors, non-profit organizations and educational institutions from all parts of the World. The list is just a glimpse of our esteemed & satisfied Clients.

Click here to take a look https://goo.gl/G3ICjV

www.niir.org



Select and Choose the Right Business Startup for You

(Instant Online Project Identification and Selection)

Finding the right startup business is one of the most popular subject today. Starting a business is no easy endeavor, but the time, effort, and challenges can be worth it if you succeed. To give yourself the best chance to be successful, take your time to carefully find the right business for you. We, at NPCS, endeavor to make business selection a simple and convenient step for any entrepreneur/startup. Our expert team, by capitalizing on its dexterity and decade's long experience in the field, has created a list of profitable ventures for entrepreneurs who wish to diversify or venture. The list so mentioned is updated regularly to give you a regular dose of new emerging opportunities.

Visit: <u>https://www.entrepreneurindia.co/project-identification</u>

www.niir.org



Download Complete List of Project Reports:

Detailed Project Reports

Visit:- <u>https://www.entrepreneurindia.co/complete-project-list</u> NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.

Our Market Survey cum Detailed Techno Economic Feasibility Report provides an insight of market in India. The report assesses the market sizing and growth of the Industry. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line.



And before diversifying/venturing into any product, they wish to study the following aspects of the identified product:

- Good Present/Future Demand
- Export-Import Market Potential
- Raw Material & Manpower Availability
- Project Costs and Payback Period

The detailed project report covers all aspect of business, from analyzing the market, confirming availability of various necessities such as Manufacturing Plant, Detailed Project Report, Profile, Business Plan, Industry Trends, Market Research, Survey, Manufacturing Process, Machinery, Raw Materials, Feasibility Study, Investment Opportunities, Cost and Revenue, Plant Economics, Production Schedule,

<u>www.niir.org</u>



Working Capital Requirement, uses and applications, Plant Layout, Project Financials, Process Flow Sheet, Cost of Project, Projected Balance Sheets, Profitability Ratios, Break Even Analysis. The DPR (Detailed Project Report) is formulated by highly accomplished and experienced consultants and the market research and analysis are supported by a panel of experts and digitalized data bank.

We at NPCS, through our reliable expertise in the project consultancy and market research field, have demystified the situation by putting forward the emerging business opportunity in India along with its business prospects......<u>Read more</u>



Contact us

- **NIIR PROJECT CONSULTANCY SERVICES**
- 106-E, Kamla Nagar, Opp. Mall ST,
- New Delhi-110007, India.
- Email: <u>npcs.ei@gmail.com</u> , <u>info@entrepreneurindia.co</u>
- Tel: +91-11-23843955, 23845654, 23845886
- Mobile: +91-9097075054, 8800733955
- Fax: +91-11-23845886
- Website : <u>www.entrepreneurindia.co</u> , <u>www.niir.org</u>
- Take a look at NIR PROJECT CONSULTANCY SERVICES on #StreetView

https://goo.gl/VstWkd





AN ISO 9001: 2015 CERTIFIED COMPANY

www.niir.org



Who are we?

- One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services
- We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad





We at NPCS want to grow with you by providing solutions scale to suit your new operations and help you reduce risk and give a high return on application investments. We have successfully achieved top-notch quality standards with a high level of customer appreciation resulting in long lasting relation and large amount of referral work through technological breakthrough and innovative concepts. A large number of our Indian, Overseas and NRI Clients have appreciated our expertise for excellence which speaks volumes about our commitment and dedication to every client's success.

www.niir.org



We bring deep, functional expertise, but are known for our holistic perspective: we capture value across boundaries and between the silos of any organization. We have proven a multiplier effect from optimizing the sum of the parts, not just the individual pieces. We actively encourage a culture of innovation, which facilitates the development of new technologies and ensures a high quality product.





What do we offer?

- Project Identification
- Detailed Project Reports/Pre-feasibility Reports
- Market Research Reports
- Business Plan
- Technology Books and Directory
- Industry Trend
- Databases on CD-ROM
- Laboratory Testing Services
- Turnkey Project Consultancy/Solutions
- Entrepreneur India (An Industrial Monthly Journal)

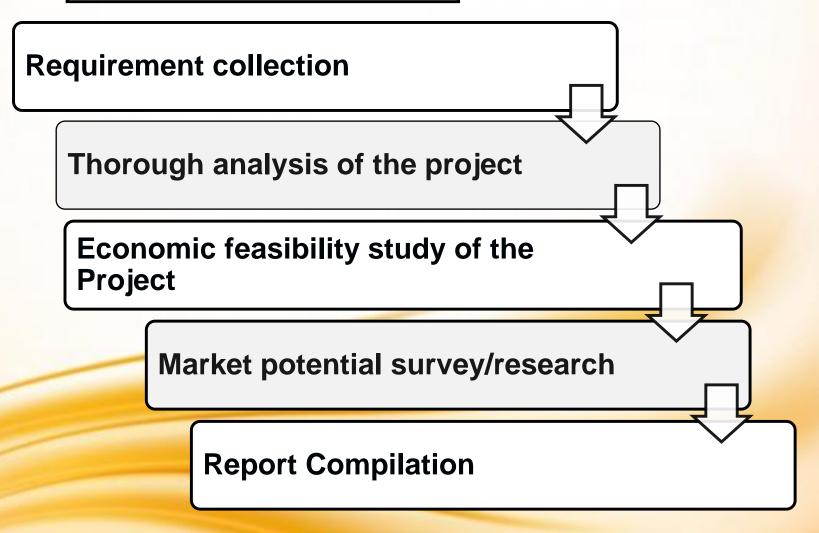
www.niir.org

How are we different ?

- We have two decades long experience in project consultancy and market research field
- We empower our customers with the prerequisite know-how to take sound business decisions
- We help catalyze business growth by providing distinctive and profound market analysis
- We serve a wide array of customers, from individual entrepreneurs to Corporations and Foreign Investors
- We use authentic & reliable sources to ensure business precision



Our Approach







Who do we Serve?

- Public-sector Companies
- Corporates
- Government Undertakings
- Individual Entrepreneurs
- o NRI's
- Foreign Investors
- Non-profit Organizations, NBFC's
- Educational Institutions
- Embassies & Consulates
- o Consultancies
- Industry / trade associations



Sectors We Cover

- Ayurvedic And Herbal Medicines, Herbal Cosmetics
- Alcoholic And Non Alcoholic Beverages, Drinks
- Adhesives, Industrial Adhesive, Sealants, Glues, Gum & Resin
- Activated Carbon & Activated Charcoal
- Aluminium And Aluminium Extrusion Profiles & Sections,
- Bio-fertilizers And Biotechnology
- Breakfast Snacks And Cereal Food
- Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling

www.niir.org



Sectors We Cover

Cont...

- **Bamboo And Cane Based Projects** Ο
- **Building Materials And Construction Projects** Ο
- Biodegradable & Bioplastic Based Projects Ο
- Chemicals (Organic And Inorganic) Ο
- Confectionery, Bakery/Baking And Other Ο Food
- **Cereal Processing** Ο
- **Coconut And Coconut Based Products** Ο
- Cold Storage For Fruits & Vegetables Ο
- Coal & Coal Byproduct



Sectors We Cover Cont...

- Copper & Copper Based Projects
- Dairy/Milk Processing
- Disinfectants, Pesticides, Insecticides, Mosquito Repellents,
- Electrical, Electronic And Computer based Projects
- o Essential Oils, Oils & Fats And Allied
- Engineering Goods
- Fibre Glass & Float Glass
- Fast Moving Consumer Goods
- Food, Bakery, Agro Processing



Sectors We Cover Cont...

- Fruits & Vegetables Processing
- Ferro Alloys Based Projects
- Fertilizers & Biofertilizers
- Ginger & Ginger Based Projects
- Herbs And Medicinal Cultivation And Jatropha (Biofuel)
- Hotel & Hospitability Projects
- Hospital Based Projects
- Herbal Based Projects
- Inks, Stationery And Export Industries



Sectors We Cover Cont...

- o Infrastructure Projects
- Jute & Jute Based Products
- Leather And Leather Based Projects
- Leisure & Entertainment Based Projects
- Livestock Farming Of Birds & Animals
- Minerals And Minerals
- Maize Processing(Wet Milling) & Maize Based Projects
- Medical Plastics, Disposables Plastic Syringe, Blood Bags
- Organic Farming, Neem Products Etc.



Sectors We Cover Cont...

- Paints, Pigments, Varnish & Lacquer
- o Paper And Paper Board, Paper Recycling Projects
- Printing Inks
- Packaging Based Projects
- Perfumes, Cosmetics And Flavours
- Power Generation Based Projects & Renewable Energy Based Projects
- Pharmaceuticals And Drugs
- Plantations, Farming And Cultivations
- o Plastic Film, Plastic Waste And Plastic Compounds
- Plastic, PVC, PET, HDPE, LDPE Etc.



Sectors We Cover cont...

- Potato And Potato Based Projects
- Printing And Packaging
- Real Estate, Leisure And Hospitality
- Rubber And Rubber Products
- Soaps And Detergents
- Stationary Products
- Spices And Snacks Food
- Steel & Steel Products
- o Textile Auxiliary And Chemicals

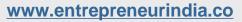


Sectors We Cover cont...

- Township & Residential Complex
- o Textiles And Readymade Garments
- Waste Management & Recycling
- Wood & Wood Products
- Water Industry(Packaged Drinking Water & Mineral Water)
- Wire & Cable



MARKET RESEARCH REPORTS



<u>www.niir.org</u>



Objective

®To get a detailed scenario of the industry along with its structure and classification >>>To provide a comprehensive analysis of the industry by covering aspects like: ∞Growth drivers of the industry Subscriptly by Barbary Strength Stre ©Insights on regulatory framework **SWOT** Analysis **©Demand-Supply Situation** ∞Foreign Trade &Porters 5 Forces Analysis



Objective

- ∞To provide forecasts of key parameters which helps to anticipate the industry performance
- ∞To help chart growth trajectory of a business by detailing the factors that affect the industry growth
- ∞To help an entrepreneur/manager in keeping abreast with
 - the changes in the industry
- So To evaluate the competitive landscape of the industry by detailing:
 - ∞Key players with their market shares
 - >>>Financial comparison of present players







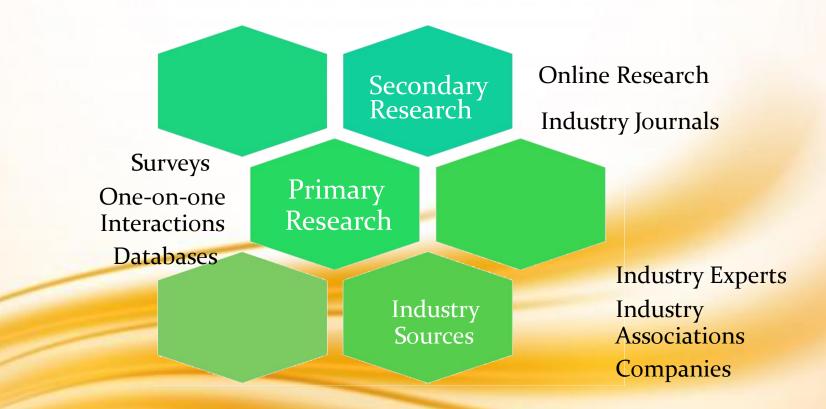
Venturist/Capitalists
Entrepreneur/Companies
Industry Researchers
Investment Funds
Foreign Investors, NRI's
Project Consultants/Chartered Accountants
Banks
Corporates

Click here for list





Data Sources



www.niir.org





www.niir.org





©Our research team comprises of experts from various financial fields:

∞MBA's

Industry Researchers

>>Financial Planners

>>>Research veterans with decades of experience





Structure of the Report

- •1. Overview
- •2. Market Analysis
 - \Box 2.1Growth Drivers
 - □2.2Emerging Trends in the Industry
 - □2.3Regulatory Framework
 - □2.4SWOT Analysis
 - 2.5Herfindahl-Hirschman Index (HHI)
- •3. Market Forecasts
- •4. Key Players



Structure of the Report Cont

805. Key Financials and Analysis
805.1 Contact Information
805.2 Key Financials
805.3 Financial comparison
806. Industry Size & Outlook





Take a look at NIR PROJECT CONSULTANCY SERVICES on #Street View





(npcs)

Contact us

NIIR PROJECT CONSULTANCY SERVICES

106-E, Kamla Nagar, Opp. Mall ST,

New Delhi-110007, India.

Email: <u>npcs.ei@gmail.com</u> , <u>info@entrepreneurindia.co</u>

Tel: +91-11-23843955, 23845654, 23845886

Mobile: +91-9097075054, 8800733955

Fax: +91-11-23845886

Website : <u>www.entrepreneurindia.co</u> , <u>www.niir.org</u>

Take a look at NIR PROJECT CONSULTANCY SERVICES on #StreetView

https://goo.gl/VstWkd

www.niir.org







<u>https://www.linkedin.com/company/niir-project-</u> <u>consultancy-services</u>



<u>https://www.facebook.com/NIIR.ORG</u>



>https://www.youtube.com/user/NIIRproject



>https://twitter.com/npcs_in



https://www.pinterest.com/npcsindia/

<u>www.niir.org</u>



THANK YOU For more information, visit us at: <u>www.niir.org</u> www.entrepreneurindia.co

www.entrepreneurindia.co

www.niir.org