

Wood Plastic Composite (WPC)

Composite Materials made of Wood Fiber/Wood Flour and Thermoplastic(s) (includes PE, PP, PVC etc.)

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, Working Capital Requirement, plant layout, process flow sheet, Cost of Project, Projected Balance Sheets, Profitability Ratios, Break Even Analysis

Introduction

Wood plastic composites (WPCs) are roughly 50:50 mixtures of thermoplastic polymers and small wood particles. The wood and thermoplastics are usually compounded above the melting temperature of the thermoplastic polymers and then further processed to make various WPC products. WPC can be manufactured in a variety of colors, shapes and sizes, and with different surface textures. Depending on the processing method, WPCs can be formed into almost any shape and thus are used for a wide variety of applications, including windows, door frames, interior panels in cars, railings, fences, landscaping timbers, cladding and siding, park benches, molding and furniture.

This product is part of the composites to be named wood polymer composite (WPC), wood fiber composite (WFC), poly wood and pall wood, poly board, wood flex, stock wood and wood plastic. WPC is manufactured by dispersing wood particles into molten plastic with coupling agent or additives to form composite material through various techniques of processing such as extrusion, compression or injection moulding.

Due to the main problems in providing forest resources and petrochemical raw materials, and high share of procurement costs and purchasing raw materials in production of lingo-cellulose and plastic materials, especially the environmental problems of polymer, various approaches in the production of wood-polymer nanocomposites has been created.

It can be used to make pallets. It can be used for making deck. It can be use for making outdoor furniture like park benches. It can be used for making school benches, Door and windows frames. It can be used for making of windows and door shutter frames. It can be used for making items floor teak and indoor furniture. It can be used for making laminated sheets. It can be used for making room partition. Wood in the garden: garden furniture, fences and other applications in the garden.

PROJECT AT A GLANCE

COST OF PROJECT				MEANS OF FINANCE			
Particulars	Existing	Proposed	Total	Particulars	Existing	Proposed	Total
Land & Site Development Exp.	0.00	110.00	110.00	Capital	0.00	139.32	139.32
Buildings	0.00	159.70	159.70	Share Premium	0.00	0.00	0.00
Plant & Machineries	0.00	173.20	173.20	Other Type Share Capital	0.00	0.00	0.00
Motor Vehicles	0.00	10.00	10.00	Reserves & Surplus	0.00	0.00	0.00
Office Automation Equipments	0.00	51.00	51.00	Cash Subsidy	0.00	0.00	0.00
Technical Knowhow Fees & Exp.	0.00	15.00	15.00	Internal Cash Accruals	0.00	0.00	0.00
Franchise & Other Deposits	0.00	0.00	0.00	Long/Medium Term Borrowings	0.00	417.97	417.97
Preliminary & Pre-operative Exp	0.00	2.00	2.00	Debentures / Bonds	0.00	0.00	0.00
Provision for Contingencies	0.00	14.00	14.00	Unsecured Loans/Deposits	0.00	0.00	0.00
Margin Money - Working Capital	0.00	22.40	22.40				
TOTAL	0.00	557.30	557.30	TOTAL	0.00	557.30	557.30



PROJECT AT A GLANCE

Year	Annualised		Book Value	Debt	Dividend	Retained Earnings		Payout	Probable Market Price	P/E Ratio	Yield Price/Book Value
	EPS	CEPS	Per Share		Per Share	Per Share				No. of Times	
	Rs	Rs	Rs	Rs	Rs	%	Rs	%	Rs		%
1-2	5.14	8.95	15.14	24.00	0.00	100.00	5.14	0.00	5.14	1.00	0.00
2-3	8.05	11.36	23.19	18.00	0.00	100.00	8.05	0.00	8.05	1.00	0.00
3-4	10.90	13.77	34.09	12.00	0.00	100.00	10.90	0.00	10.90	1.00	0.00
4-5	13.64	16.15	47.73	6.00	0.00	100.00	13.64	0.00	13.64	1.00	0.00
5-6	16.27	18.46	64.00	0.00	0.00	100.00	16.27	0.00	16.27	1.00	0.00

PROJECT AT A GLANCE

Year	D. S. C. R.			Debt / - Deposit s Debt	Equity as- Equity	Total Net Worth	Return on Net Worth	Profitability Ratio					Assets Turnove r Ratio	Curren t Ratio
	Individ ual	Cumulat ive	Overal l					GPM	PBT	PAT	Net Contri bution	P/V Ratio		
	(Number of times)			(Number of times)		%	%	%	%	%	%			
Initial				3.00	3.00									
1-2	1.32	1.32		1.59	1.59	1.93		32.29%	12.93%	8.98%	481.06	60.32%	1.32	0.87
2-3	1.62	1.46		0.78	0.78	1.04		35.13%	18.41%	12.06%	555.47	59.70%	1.44	1.33
3-4	1.99	1.62	1.98	0.35	0.35	0.55		37.07%	22.26%	14.28%	634.69	59.69%	1.46	1.91
4-5	2.42	1.79		0.13	0.13	0.29		38.39%	25.00%	15.89%	713.91	59.68%	1.41	2.60
5-6	2.93	1.98		0.00	0.00	0.13		39.30%	26.95%	17.05%	793.12	59.67%	1.33	5.77

PROJECT AT A GLANCE

BEP	
BEP - Maximum Utilisation Year	5
Cash BEP (% of Installed Capacity)	50.85%
Total BEP (% of Installed Capacity)	54.70%
IRR, PAYBACK and FACR	
Internal Rate of Return .. (In %age)	25.67%
Payback Period of the Project is (In Years)	2 Years 3 Months
Fixed Assets Coverage Ratio (No. of times)	3.942



Major Queries/Questions Answered in the Report?

1. **What is Wood Plastic Composite industry?**
2. **How has the Wood Plastic Composite industry performed so far and how will it perform in the coming years?**
3. **What is the Project Feasibility of a Wood Plastic Composite Plant?**
4. **What are the requirements of Working Capital for setting up a Wood Plastic Composite plant?**
5. **What is the structure of the Wood Plastic Composite Business and who are the key/major players?**

- 6. What is the total project cost for setting up a Wood Plastic Composite plant?**
- 7. What are the operating costs for setting up a Wood Plastic Composite project?**
- 8. What are the machinery and equipment requirements for setting up a Wood Plastic Composite plant?**
- 9. Who are the Suppliers and Manufacturers of Plant & Machinery for setting up a Wood Plastic Composite plant?**
- 10. What are the requirements of raw material for setting up a Wood Plastic Composite project?**

11. Who are the Suppliers and Manufacturers of Raw materials for setting up a Wood Plastic Composite plant?
12. What is the Manufacturing Process and Formulations of a Wood Plastic Composite Industry?
13. What is the total size of land required for setting up a Wood Plastic Composite project?
14. What will be the income and expenditures for a Wood Plastic Composite project?
15. What are the Projected Balance Sheets of a Wood Plastic Composite plant?

16. What are the requirement of utilities and overheads for setting up a Wood Plastic Composite plant?
17. What is the Built up Area Requirement and cost for setting up a Wood Plastic Composite Business?
18. What are the Personnel (Manpower) Requirements for setting up a Wood Plastic Composite Business?
19. What are Statistics of Import & Export for Wood Plastic Composite?
20. What is the time required to break-even?

21. What is the Break-Even Analysis of a Wood Plastic Composite plant?
22. What are the Project financials of a Wood Plastic Composite plant?
23. What are the Profitability Ratios of a Wood Plastic Composite plant?
24. What is the Sensitivity Analysis-Price/Volume of a Wood Plastic Composite project?
25. What are the Projected Pay-Back Period and IRR of a Wood Plastic Composite plant?

- 26. What is the Process Flow Sheet Diagram of a Wood Plastic Composite project?**
- 27. What are the Market Opportunities for setting up a Wood Plastic Composite plant?**
- 28. What is the Market Study and Assessment for setting up a Wood Plastic Composite plant?**
- 29. What is the Plant Layout for setting up a Wood Plastic Composite Business?**

Table of Contents of the Project Report



1. Project Location

1.1. District Profile & Geotechnical Site Characterization

- 1.1.1. Location & Geographical Area
- 1.1.2. Area & Population
- 1.1.3. Administrative Set Up
- 1.1.4. Industry At A Glance
- 1.1.5. Growth Trend
- 1.1.6. Potential For New Msme-
- 1.1.7. Transport
- 1.1.8. Map

2. Introduction

3. Properties

3.1. Mechanical Properties Of Wood-polymer Composites

4. Use Of Wooden Plastic Composite

5. Advantages & Disadvantages Of Wpc

5.1. Advantages

5.2. Disadvantages

6. PVC Foam Boards

6.1. Properties:

6.2. Applications

6.3. Pvc Crust Foam Board

6.3.1. PVC Crust Foam Board Features:

6.3.2. PVC Crust Foam Board Application:

6.4. Rigid Pvc Foam Board

6.4.1. PVC Rigid Foam Board Excellent Features:

6.4.2. PVC Rigid Foam Board Applications:

7. Codes & Standards



7. Codes & Standards

8. Market Survey

8.1. Global Market For Wpc

8.2. Technological Trends

9. Import Statistics Data Of India

9.1. Import Statistics Data On Wood Plastic Composite

10. Raw Material

11. Formulation

12. Manufacturing Process

13. Types Of Extrusion System
14. Process Flow Diagram
15. Schematic Flow Diagram Of The WPC
16. Suppliers Of Raw Material

17. Suppliers Of Plant & Machinery

17.1. Complete Machinery Suppliers

18. Product, Machinery & Raw Material Photographs

18.1. Product Photographs

18.2. Machinery Photographs

18.3. Raw Material Photographs

19. Plant Layout

Project Financials

- **Project at a Glance** **Annexure**
- Assumptions for Profitability workings1
- Plant Economics.....2
- Production Schedule.....3
- Land & Building.....4
 - Factory Land & Building
 - Site Development Expenses



- **Plant & Machinery.....5**
 - Indigenous Machineries**
 - Other Machineries (Miscellaneous, Laboratory etc.)**

- **Other Fixed Assets.....6**
 - Furniture & Fixtures**
 - Pre-operative and Preliminary Expenses**
 - Technical Knowhow**
 - Provision of Contingencies**

- **Working Capital Requirement Per Month.....7**
 - Raw Material**
 - Packing Material**
 - Lab & ETP Chemical Cost**
 - Consumable Store**

- **Overheads Required Per Month and Per Annum.....8**
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**



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



- **Annexure 21** :: **Employees Expenses**
- **Annexure 22** :: **Fuel Expenses**
- **Annexure 23** :: **Power/Electricity Expenses**
- **Annexure 24** :: **Royalty & Other Charges**
- **Annexure 25** :: **Repairs & Maintenance Expenses**
- **Annexure 26** :: **Other Manufacturing Expenses**
- **Annexure 27** :: **Administration Expenses**
- **Annexure 28** :: **Selling Expenses**



- **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**



Niir Project Consultancy Services (NPCS)
can provide Detailed Project Report on
Wood Plastic Composite

See more:

<http://goo.gl/eJ4Ekz>

<http://goo.gl/BbdWJb>

<http://goo.gl/kP9xq5>



Visit us at

www.entrepreneurindia.co



**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>



NIIR PROJECT CONSULTANCY SERVICES

An ISO 9001:2008 Company



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*



What do we offer?

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



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

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation

Who do we serve?

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



Sectors We Cover *Cont...*

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



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*



Sectors We Cover *Cont...*

- *Copper & Copper Based Projects*
- *Dairy/Milk Processing*
- *Disinfectants, Pesticides, Insecticides, Mosquito Repellents,*
- *Electrical, Electronic And Computer based Projects*
- *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 & Hospitality Projects*
- *Hospital Based Projects*
- *Herbal Based Projects*
- *Inks, Stationery And Export Industries*



Sectors We Cover *Cont...*

- *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*
- *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*
- *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*
- *Textile Auxiliary And Chemicals*



Sectors We Cover *Cont...*

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



Niir Project Consultancy Services

106-E, Kamla Nagar, New Delhi-110007, India.

Email: npcs.ei@gmail.com , info@entrepreneurindia.co

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

Mobile: +91-9811043595

Fax: +91-11-23841561

Website : www.entrepreneurindia.co

Take a look at NIIR PROJECT CONSULTANCY SERVICES on #StreetView

<https://goo.gl/VstWkd>





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



➤ <https://www.facebook.com/NIIR.ORG>



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



➤ <https://plus.google.com/+EntrepreneurIndiaNewDelhi>



➤ https://twitter.com/npcs_in



➤ <https://www.pinterest.com/npcsindia/>





**For more information, visit
us at:**

www.entrepreneurindia.co

