MDF, Medium Density Fiberboard

(Interior-use Engineered Wood Panel Product, Manufactured from Wood Fibres)

Medium-density fibreboard (MDF) is an engineered wood product made by breaking down hardwood or softwood residuals into wood fibres, often in a defibrator, combining it with wax and a resin binder, and forming panels by applying high temperature and pressure.
Medium density fibreboard is made basically the same way as particle board which is by gluing the fibres together with a resin and then compressing the board under heat, later the board is cut into appropriate lengths after it has dried.
Advantages:

- It is cost effective
- It’s available in many sizes
- Has no natural defects
- Can be easily machined
MDF is reconstituted into wood sheets in a variety of widths and lengths. Bonding is achieved by the addition of synthetic resin adhesives, which are cured under heat and pressure. Paraffin wax is added to assist with water repellency, while other chemicals can be added during manufacturing for more specific protection.
Medium Density Fiberboard (MDF) is widely used in the manufacturing of furniture, kitchen cabinets, door parts, mouldings, millwork and laminate flooring.
Common Uses:

- Doors, Jambs & Millwork
- Laminate Flooring
- Laminating & Finishing
- Moulding
- Office & Residential Furniture
- Kitchen Cabinets
The MDF production process involves grinding wood chips into fibres and binding them with synthetic resin under heat and pressure. MDF is used mainly for the furniture industry, skirting boards, architraves, packaging material, in the door industry and in everything from book covers to shoes.
The MDF production line mainly includes chipping, screening, refining, glue preparation, drying, mat forming, pre-pressing, loading & unloading, hot pressing, edge trimming & sanding. The process starts from the wood yard, designed to ensure continuous & un-interrupted supply of woods.
MDF markets are now more mature, and price competitive, which has driven producers to improve quality and develop new products and markets. There has been significant change in ownership structure during the world economic downturn, and further changes can be expected.
Producers, suppliers and traders will need to understand these changes to take advantage of the opportunities this presents for production, investment and trade, as the global economy recovers. High demand for medium density fibreboard (MDF) in the world market has led MDF manufacturers to increase their production capacity. This has resulted in an increased requirement for raw materials to fulfill the market demand.
# Project at a Glance

<table>
<thead>
<tr>
<th>COST OF PROJECT</th>
<th>MEANS OF FINANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Particulars</strong></td>
<td><strong>Existing</strong></td>
</tr>
<tr>
<td>Land &amp; Site Development Exp.</td>
<td>0.00</td>
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<tr>
<td>Buildings</td>
<td>0.00</td>
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<tr>
<td>Plant &amp; Machineries</td>
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</tr>
<tr>
<td>Motor Vehicles</td>
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<tr>
<td>Office Automation Equipments</td>
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<td>Technical Knowhow Fees &amp; Exp.</td>
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<td>Franchise &amp; Other Deposits</td>
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<td>Preliminary &amp; Pre-operative Exp</td>
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<td>Provision for Contingencies</td>
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<tr>
<td>Margin Money - Working Capital</td>
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<tr>
<td><strong>TOTAL</strong></td>
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## Project at a Glance

<table>
<thead>
<tr>
<th>Year</th>
<th>Annualised</th>
<th>Book Value</th>
<th>Debt</th>
<th>Dividend</th>
<th>Retained Earnings</th>
<th>Payout</th>
<th>Probable Market Price</th>
<th>P/E Ratio</th>
<th>Yield Price/Book Value</th>
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<tbody>
<tr>
<td>1-2</td>
<td>5.89</td>
<td>10.27</td>
<td>15.89</td>
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<td>100.00</td>
<td>5.89</td>
<td>1.00</td>
<td>0.00</td>
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<td>2-3</td>
<td>8.46</td>
<td>12.25</td>
<td>24.35</td>
<td>18.00</td>
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<td>100.00</td>
<td>8.46</td>
<td>1.00</td>
<td>0.00</td>
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<td>11.07</td>
<td>14.34</td>
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<td>16.18</td>
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</table>
## Project at a Glance

<table>
<thead>
<tr>
<th>Year</th>
<th>D. S. C. R.</th>
<th>Debt / Deposits Debt</th>
<th>Equity as Equity</th>
<th>Total Net Worth</th>
<th>Return on Net Worth</th>
<th>Profitability Ratio</th>
<th>Assets Turnover Ratio</th>
<th>Current Ratio</th>
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<tbody>
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<tr>
<td>Individu al</td>
<td>Cumulative Overall</td>
<td>(Number of times)</td>
<td>(Number of times)</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
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<tr>
<td>Initial</td>
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<td>3.00</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>1-2</td>
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<td>1.46</td>
<td>1.51</td>
<td>1.51</td>
<td>2.40</td>
<td>12.10%</td>
<td>7.17%</td>
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<td>1.73</td>
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<td>1.41</td>
<td>13.61%</td>
<td>9.68%</td>
<td>6.50%</td>
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<td>1.73</td>
<td>2.06</td>
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<td>0.34</td>
<td>0.87</td>
<td>14.64%</td>
<td>11.48%</td>
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<td>2.46</td>
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<td>0.12</td>
<td>0.12</td>
<td>0.55</td>
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<td>0.36</td>
<td>15.84%</td>
<td>13.75%</td>
<td>8.70%</td>
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## Project at a Glance

<table>
<thead>
<tr>
<th>BEP</th>
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<tbody>
<tr>
<td>BEP - Maximum Utilisation Year</td>
<td>5</td>
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<tr>
<td>Cash BEP (% of Installed Capacity)</td>
<td>38.87%</td>
</tr>
<tr>
<td>Total BEP (% of Installed Capacity)</td>
<td>44.18%</td>
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### IRR, PAYBACK and FACR

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Internal Rate of Return (In %age)</td>
<td>28.35%</td>
</tr>
<tr>
<td>Payback Period of the Project is (In Years)</td>
<td>2 Years 3 Months</td>
</tr>
<tr>
<td>Fixed Assets Coverage Ratio (No. of times)</td>
<td>8.633</td>
</tr>
</tbody>
</table>
1. What is Medium Density Fiberboard (MDF) industry?
2. How has the Medium Density Fiberboard (MDF) industry performed so far and how will it perform in the coming years?
3. What is the Project Feasibility of a Medium Density Fiberboard (MDF) Plant?
4. What are the requirements of Working Capital for setting up an Medium Density Fiberboard (MDF) plant?
5. What is the structure of the Medium Density Fiberboard (MDF) industry and who are the key/major players?

6. What is the total project cost for setting up a Medium Density Fiberboard (MDF) plant?

7. What are the operating costs for setting up a Medium Density Fiberboard (MDF) plant?

8. What are the machinery and equipment requirements for setting up a Medium Density Fiberboard (MDF) Business?
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11. Who are the Suppliers and Manufacturers of Raw materials for setting up a Medium Density Fiberboard (MDF) Business?

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23. What are the Profitability Ratios of a Medium Density Fiberboard (MDF) plant?
24. What is the Sensitivity Analysis-Price/Volume of a Medium Density Fiberboard (MDF) plant?
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   1.5. Map
   1.6. Economy
   1.7. Culture & Attitudes

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3.2. Possible Form Alteration
3.3. Durability
3.4. Manufacturability

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5. Properties
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5.2. Product Standards And Certification
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8.4. Threat:
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9.2. Profits & Appropriations

9.3. Total Liabilities

9.4. Total Assets

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9.6.2. Name Of Director(s)

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9.6.4. Location Of Plant
9.6.5. Capital Expenditure Projects
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9.7.5. Assets
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9.7.7. Growth in Income & Expenditure
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9.7.9. Profitability Ratio
9.7.10. Return Ratios
9.7.11. Cost as % ge of sales
9.7.12. Working Capital & Turnover Ratios
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10.1. Raw Materials And Composition

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11.1. Required Machinery Section
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12. Manufacturing Process
13. Flow Sheet Diagram

14. Environmental Concern
14.1. List Of Pollution Control Equipment At Various Manufacturing Stages:

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  - Achievable Efficiency/Yield % of Products/Services/Items
  - Net Usable Load/Capacity of Products/Services/Items
  - Expected Sales/ Revenue/ Income of Products/ Services/ Items
<table>
<thead>
<tr>
<th>Annexure 14</th>
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<th>Product wise domestic Sales Realisation</th>
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<tr>
<td>Annexure 15</td>
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<td>Total Raw Material Cost</td>
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<td>Annexure 16</td>
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<td>Raw Material Cost per unit</td>
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<td>Annexure 17</td>
<td>::</td>
<td>Total Lab &amp; ETP Chemical Cost</td>
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<td>Annexure 18</td>
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<td>Consumables, Store etc.,</td>
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<td>Annexure 19</td>
<td>::</td>
<td>Packing Material Cost</td>
</tr>
<tr>
<td>Annexure 20</td>
<td>::</td>
<td>Packing Material Cost Per Unit</td>
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</table>
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• Annexure 22 :: Fuel Expenses
• Annexure 23 :: Power/Electricity Expenses
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Niir Project Consultancy Services (NPCS) can provide Detailed Project Report on Medium Density Fiberboard (MDF).

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Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation

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○ **Building Materials And Construction Projects**
○ **Biodegradable & Bioplastic Based Projects**
○ **Chemicals (Organic And Inorganic)**
○ **Confectionery, Bakery/Baking And Other Food**
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○ **Coconut And Coconut Based Products**
○ **Cold Storage For Fruits & Vegetables**
○ **Coal & Coal Byproduct**
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- Ginger & Ginger Based Projects
- Herbs And Medicinal Cultivation And Jatropha (Biofuel)
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- Hospital Based Projects
- Herbal Based Projects
- Inks, Stationery And Export Industries
- 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
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- Power Generation Based Projects & Renewable Energy Based Projects
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- Textile Auxiliary And Chemicals
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- Textiles And Readymade Garments
- Waste Management & Recycling
- Wood & Wood Products
- Water Industry (Packaged Drinking Water & Mineral Water)
- Wire & Cable

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