



AN ISO 9001 : 2015 CERTIFIED COMPANY

Detailed project report

Sample edition

Projections from FY 2027-28

Project report

# Magnesium Sulphate

Installed capacity 25 MT per day

Sector Inorganic chemicals

Total project cost ₹373.74 lakh

**Illustrative sample**  
Figures are representative

## Project at a glance

Magnesium Sulphate  
25 MT per day

| Product                | Magnesium Sulphate  | Sector                  | Inorganic chemicals      |
|------------------------|---------------------|-------------------------|--------------------------|
| Installed capacity     | 25 MT per day       | Annual capacity         | 8,250 MT per year        |
| Selling price (ex-GST) | ₹12,400 per MT      | Working days            | 330 a year               |
| Manpower               | 14 people           | Plant and machinery     | ₹184.46 lakh             |
| Total project cost     | <b>₹373.74 lakh</b> | Promoter's contribution | ₹93.44 lakh (25%)        |
| Term loan              | ₹280.30 lakh (75%)  | Cash credit limit       | ₹69.49 lakh              |
| Revenue, Year 3        | ₹716.10 lakh at 70% | Net profit, Year 3      | ₹94.76 lakh              |
| Return on investment   | <b>25.4% a year</b> | Break-even, Year 3      | <b>33.5% of capacity</b> |
| Average DSCR           | <b>1.99</b>         | Payback period          | 3.3 years                |

This is an illustrative sample. Its figures are generated from industry-typical ratios to show the format and depth of an NPCS project report. They are not taken from any NPCS report or any real project, and should not be used for investment or lending decisions.

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## 1 Introduction

The product covered in this sample is magnesium sulphate, made in a plant sized at 25 MT per day (8,250 MT per year at full capacity). The unit is costed as a complete project, from land and building through to working capital, and its applications range from secondary nutrient fertiliser supplying magnesium and sulphur to bath salts and pharmaceutical formulations.

The projections cover the first five years of operation, starting FY 2027–28. By Year 3 the plant runs at 70% of capacity, with revenue of ₹716.10 lakh and a net profit of ₹94.76 lakh.

## 2 Uses and applications

The main applications and markets for the product are:

- Secondary nutrient fertiliser supplying magnesium and sulphur
- Water soluble fertiliser blends for drip and foliar feeding
- Leather tanning and textile dyeing
- Animal feed premixes
- Bath salts and pharmaceutical formulations

## 3 Market potential

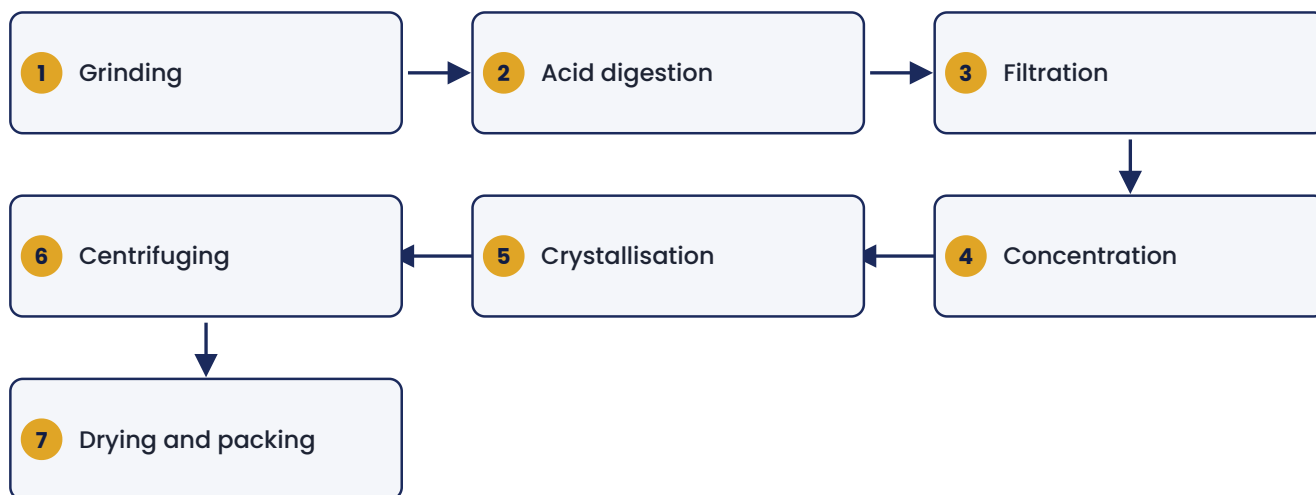
Most magnesium sulphate in India is sold as a fertiliser for crops grown on magnesium and sulphur deficient soils, such as sugarcane, banana, grapes, vegetables, tea and oil palm, and demand follows the sowing season. Technical grade goes to leather, textile and feed makers, while higher purity grades go to pharmaceutical and bath salt buyers who pay more for consistent quality. A plant close to magnesite and acid supply, with a dealer network in the main horticulture belts, can compete with larger producers on freight and service.

Sales are typically made to fertiliser companies and water soluble fertiliser blenders, agri input dealers and distributors, tanneries and textile processors, animal feed and premix manufacturers, and pharmaceutical and bath salt makers.

Because demand and competition vary from one district to the next, the market section of a full report is prepared for the promoter's chosen location, with a list of existing manufacturers.

## 4 Manufacturing process

Production of magnesium sulphate follows seven main steps, from grinding to drying and packing. The flow chart shows how material moves through the plant.



Process flow for magnesium sulphate

- 1 Grinding.** Caustic calcined magnesite is ground in a ball mill to a fine powder so it reacts fully with the acid.
- 2 Acid digestion.** The powder is added to dilute sulphuric acid in rubber-lined reactors and stirred until the liquor is close to neutral.
- 3 Filtration.** A filter press removes silica, iron and other insoluble matter from the magnesium sulphate liquor.
- 4 Concentration.** The clear liquor is evaporated until it is close to saturation.
- 5 Crystallisation.** The hot liquor is cooled slowly so that magnesium sulphate heptahydrate crystals form.
- 6 Centrifuging.** Crystals are separated in basket centrifuges and the mother liquor is sent back to the reactors.
- 7 Drying and packing.** Crystals are dried with warm air below the temperature at which they lose water, screened and packed in lined HDPE bags.

## 5 Raw materials

The main raw materials are caustic calcined magnesite, sulphuric acid (98%), and filter aid and process chemicals. In Year 3, at 70% utilisation, raw materials cost ₹358.04 lakh, about 50% of sales. The table shows how this cost splits between materials.

| Raw material                     | Share of cost | Year 3 cost (₹ lakh) |
|----------------------------------|---------------|----------------------|
| Caustic calcined magnesite       | 46.0%         | 164.70               |
| Sulphuric acid (98%)             | 50.0%         | 179.02               |
| Filter aid and process chemicals | 4.0%          | 14.32                |
| <b>Total raw materials</b>       | <b>100.0%</b> | <b>358.04</b>        |

## 6 Plant and machinery

Plant and machinery for the model unit is estimated at ₹184.46 lakh, before the contingency allowance. The rubber-lined reactors with agitators is the largest single item. A full NPCS report adds specifications and supplier names for each machine.

| Machinery and equipment              | Indicative cost (₹ lakh) |
|--------------------------------------|--------------------------|
| Ball mill for calcined magnesite     | 14.76                    |
| Rubber-lined reactors with agitators | 36.89                    |
| Filter press                         | 16.60                    |
| Evaporator for liquor concentration  | 29.51                    |
| Cooling crystallisers                | 27.67                    |
| Basket centrifuges                   | 18.45                    |
| Fluid bed dryer                      | 18.45                    |
| Acid storage tanks and fume scrubber | 12.91                    |
| Screening and bagging system         | 9.22                     |
| <b>Total plant and machinery</b>     | <b>184.46</b>            |

## 7 Land, building and utilities

Land and site development is taken at ₹39.07 lakh and building and civil works at ₹81.29 lakh. Other fixed assets, including electrification, furniture, testing equipment and power backup, add ₹23.92 lakh. Land rates vary widely by location, so these are the figures most likely to change in a real project.

Utilities in Year 3 cost ₹56.54 lakh for power and fuel, or 7.9% of sales. The plant also needs a reliable water supply for cleaning and domestic use, and for the process where required.

## 8 Manpower

The unit employs 14 people. Wages and salaries come to ₹31.44 lakh in Year 1 and are assumed to rise by 5% a year.

| Category                                   | Number    | Monthly wage (₹) | Annual cost (₹ lakh) |
|--------------------------------------------|-----------|------------------|----------------------|
| Management, supervision and administration | 2         | 32,500           | 7.80                 |
| Skilled workers and operators              | 5         | 20,500           | 12.30                |
| Semi-skilled and unskilled workers         | 7         | 13,500           | 11.34                |
| <b>Total (Year 1)</b>                      | <b>14</b> |                  | <b>31.44</b>         |

## 9 Licences and approvals

A unit of this kind typically needs the following registrations and approvals. Requirements vary by state and by the exact product, so confirm them with the local authorities before applying.

- Udyam (MSME) registration
- GST registration
- Consent to establish and consent to operate from the State Pollution Control Board
- Factory licence or registration under the applicable labour law, where the workforce threshold applies
- Fire safety NOC, where required
- Trade licence from the local body
- Fertiliser Control Order specification for magnesium sulphate (magnesium at least 9.6% and sulphur at least 12%) for fertiliser grade
- Authorisation under the Fertiliser Control Order to sell fertiliser grade product
- IS 2730 (BIS) as the reference standard for technical grade

## 10 Project cost and means of finance

Setting up the unit costs ₹373.74 lakh in all, of which plant and machinery is ₹184.46 lakh. The estimate includes a 5% contingency on building and machinery, pre-operative expenses and the margin money needed to start working capital.

| Cost of project                                                        | ₹ lakh        |
|------------------------------------------------------------------------|---------------|
| Land and site development                                              | 39.07         |
| Building and civil works                                               | 81.29         |
| Plant and machinery                                                    | 184.46        |
| Other fixed assets (electrification, furniture, lab equipment, DG set) | 23.92         |
| Contingencies                                                          | 13.29         |
| Preliminary and pre-operative expenses                                 | 8.55          |
| Margin money for working capital                                       | 23.16         |
| <b>Total cost of project</b>                                           | <b>373.74</b> |

### Means of finance

The project is financed 75:25 between bank debt and the promoter's own funds. A term loan covers ₹280.30 lakh and the promoter brings in ₹93.44 lakh. Separately, a cash credit limit of ₹69.49 lakh finances 75% of the working capital requirement.

| Source of funds                                         | ₹ lakh        |
|---------------------------------------------------------|---------------|
| Promoter's contribution (25%)                           | 93.44         |
| Term loan from bank (75%)                               | 280.30        |
| <b>Total means of finance</b>                           | <b>373.74</b> |
| <i>Cash credit limit for working capital (separate)</i> | <i>69.49</i>  |

## 11 Working capital

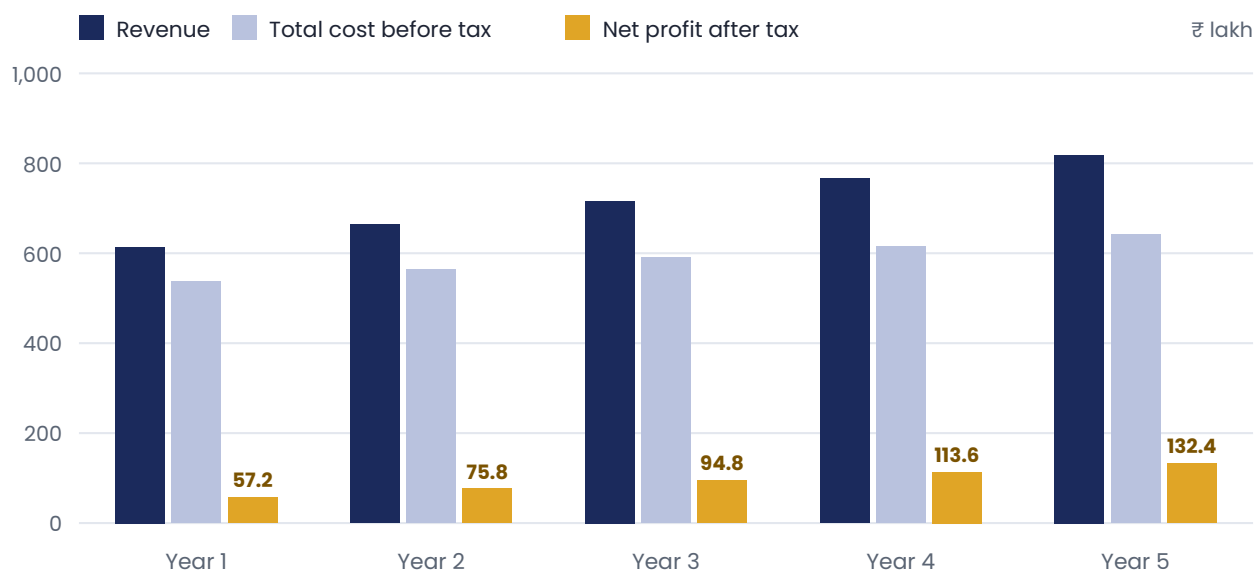
The unit needs ₹92.65 lakh of working capital in Year 1, based on 30 days of raw material stock, 15 days of finished goods and 45 days of customer credit, net of 30 days of supplier credit. Of this, ₹69.49 lakh comes from the bank and ₹23.16 lakh from the promoter.

| Particulars (₹ lakh)               | Year 1<br>FY 2027-28 | Year 2<br>FY 2028-29 | Year 3<br>FY 2029-30 | Year 4<br>FY 2030-31 | Year 5<br>FY 2031-32 |
|------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Raw material stock (30 days)       | 25.22                | 27.33                | 29.43                | 31.53                | 33.63                |
| Work in progress (2 days)          | 2.12                 | 2.29                 | 2.46                 | 2.63                 | 2.81                 |
| Finished goods (15 days)           | 17.33                | 18.72                | 20.12                | 21.52                | 22.92                |
| Trade receivables (45 days)        | 75.67                | 81.98                | 88.29                | 94.59                | 100.90               |
| <b>Total current assets</b>        | <b>120.34</b>        | <b>130.32</b>        | <b>140.30</b>        | <b>150.27</b>        | <b>160.26</b>        |
| Less: trade creditors (30 days)    | 27.69                | 30.00                | 32.30                | 34.61                | 36.92                |
| <b>Working capital requirement</b> | <b>92.65</b>         | <b>100.32</b>        | <b>108.00</b>        | <b>115.66</b>        | <b>123.34</b>        |

## 12 Projected profitability

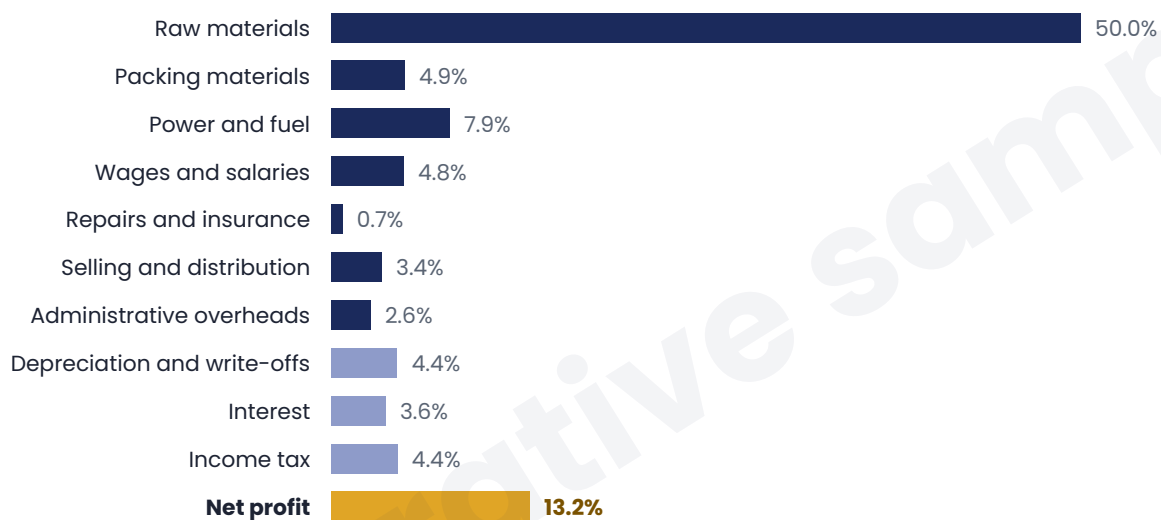
Revenue grows from ₹613.80 lakh in Year 1, at 60% utilisation, to ₹818.40 lakh in Year 5 at 80%. Net profit rises from ₹57.22 lakh to ₹132.44 lakh over the same period, an average net margin of 13%.

| Particulars (₹ lakh)              | Year 1<br>FY 2027-28 | Year 2<br>FY 2028-29 | Year 3<br>FY 2029-30 | Year 4<br>FY 2030-31 | Year 5<br>FY 2031-32 |
|-----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Capacity utilisation (%)          | 60%                  | 65%                  | 70%                  | 75%                  | 80%                  |
| Revenue from operations           | 613.80               | 664.95               | 716.10               | 767.25               | 818.40               |
| Raw materials consumed            | 306.89               | 332.47               | 358.04               | 383.62               | 409.19               |
| Packing materials                 | 29.97                | 32.47                | 34.97                | 37.46                | 39.96                |
| Power and fuel                    | 48.47                | 52.50                | 56.54                | 60.58                | 64.62                |
| Wages and salaries                | 31.44                | 33.01                | 34.66                | 36.40                | 38.22                |
| Repairs and maintenance           | 3.69                 | 3.87                 | 4.07                 | 4.27                 | 4.48                 |
| Insurance                         | 1.21                 | 1.21                 | 1.21                 | 1.21                 | 1.21                 |
| Cost of production                | 421.67               | 455.53               | 489.49               | 523.54               | 557.68               |
| <b>Gross profit</b>               | <b>192.13</b>        | <b>209.42</b>        | <b>226.61</b>        | <b>243.71</b>        | <b>260.72</b>        |
| Selling and distribution expenses | 20.61                | 22.33                | 24.05                | 25.76                | 27.48                |
| Administrative overheads          | 17.01                | 17.86                | 18.76                | 19.69                | 20.68                |
| <b>Operating profit (EBITDA)</b>  | <b>154.51</b>        | <b>169.23</b>        | <b>183.80</b>        | <b>198.26</b>        | <b>212.56</b>        |
| Depreciation                      | 39.98                | 34.52                | 29.84                | 25.80                | 22.34                |
| Preliminary expenses written off  | 1.71                 | 1.71                 | 1.71                 | 1.71                 | 1.71                 |
| Interest on term loan             | 28.89                | 24.24                | 18.27                | 11.64                | 4.28                 |
| Interest on cash credit           | 7.64                 | 7.64                 | 7.64                 | 7.64                 | 7.64                 |
| <b>Profit before tax</b>          | <b>76.29</b>         | <b>101.12</b>        | <b>126.34</b>        | <b>151.47</b>        | <b>176.59</b>        |
| Income tax                        | 19.07                | 25.28                | 31.58                | 37.87                | 44.15                |
| <b>Profit after tax</b>           | <b>57.22</b>         | <b>75.84</b>         | <b>94.76</b>         | <b>113.60</b>        | <b>132.44</b>        |



Revenue, total cost before tax and net profit after tax, ₹ lakh

### Where each rupee of sales goes in Year 3



Each cost head as a percentage of Year 3 sales

## 13 Cash flow statement

Cash generated from profit and depreciation covers the term loan repayments in every year. The closing cash balance builds up to ₹323.90 lakh by the end of Year 5.

| Particulars (₹ lakh)                    | Year 1<br>FY 2027-28 | Year 2<br>FY 2028-29 | Year 3<br>FY 2029-30 | Year 4<br>FY 2030-31 | Year 5<br>FY 2031-32 |
|-----------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Sources of funds</b>                 |                      |                      |                      |                      |                      |
| Promoter's contribution                 | 93.44                | –                    | –                    | –                    | –                    |
| Term loan from bank                     | 280.30               | –                    | –                    | –                    | –                    |
| Cash credit (working capital) from bank | 69.49                | –                    | –                    | –                    | –                    |
| Net profit after tax                    | 57.22                | 75.84                | 94.76                | 113.60               | 132.44               |
| Depreciation                            | 39.98                | 34.52                | 29.84                | 25.80                | 22.34                |
| Preliminary expenses written off        | 1.71                 | 1.71                 | 1.71                 | 1.71                 | 1.71                 |
| Increase in trade creditors             | 27.69                | 2.31                 | 2.30                 | 2.31                 | 2.31                 |
| <b>Total sources</b>                    | <b>569.83</b>        | <b>114.38</b>        | <b>128.61</b>        | <b>143.42</b>        | <b>158.80</b>        |
| <b>Application of funds</b>             |                      |                      |                      |                      |                      |
| Fixed assets                            | 342.03               | –                    | –                    | –                    | –                    |
| Preliminary and pre-operative expenses  | 8.55                 | –                    | –                    | –                    | –                    |
| Increase in inventories                 | 44.67                | 3.67                 | 3.67                 | 3.67                 | 3.68                 |
| Increase in trade receivables           | 75.67                | 6.31                 | 6.31                 | 6.30                 | 6.31                 |
| Repayment of term loan                  | 25.04                | 54.18                | 60.16                | 66.78                | 74.14                |
| Drawings                                | –                    | –                    | –                    | –                    | –                    |
| <b>Total application</b>                | <b>495.96</b>        | <b>64.16</b>         | <b>70.14</b>         | <b>76.75</b>         | <b>84.13</b>         |
| <b>Net cash flow</b>                    | <b>73.87</b>         | <b>50.22</b>         | <b>58.47</b>         | <b>66.67</b>         | <b>74.67</b>         |
| Opening cash balance                    | –                    | 73.87                | 124.09               | 182.56               | 249.23               |
| <b>Closing cash balance</b>             | <b>73.87</b>         | <b>124.09</b>        | <b>182.56</b>        | <b>249.23</b>        | <b>323.90</b>        |

## 14 Projected balance sheet

Over the projection, retained profits build the promoter's net worth from ₹143.82 lakh to ₹567.30 lakh, and the term loan reduces from ₹255.26 lakh to nil as it is repaid.

| As at year end (₹ lakh)              | Year 1<br>FY 2027-28 | Year 2<br>FY 2028-29 | Year 3<br>FY 2029-30 | Year 4<br>FY 2030-31 | Year 5<br>FY 2031-32 |
|--------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Liabilities</b>                   |                      |                      |                      |                      |                      |
| Promoter's capital                   | 93.44                | 93.44                | 93.44                | 93.44                | 93.44                |
| Reserves and surplus                 | 57.22                | 133.06               | 227.82               | 341.42               | 473.86               |
| Term loan                            | 255.26               | 201.08               | 140.92               | 74.14                | –                    |
| Cash credit from bank                | 69.49                | 69.49                | 69.49                | 69.49                | 69.49                |
| Trade creditors                      | 27.69                | 30.00                | 32.30                | 34.61                | 36.92                |
| <b>Total liabilities</b>             | <b>503.10</b>        | <b>527.07</b>        | <b>563.97</b>        | <b>613.10</b>        | <b>673.71</b>        |
| <b>Assets</b>                        |                      |                      |                      |                      |                      |
| Gross fixed assets                   | 342.03               | 342.03               | 342.03               | 342.03               | 342.03               |
| Less: accumulated depreciation       | (39.98)              | (74.50)              | (104.34)             | (130.14)             | (152.48)             |
| <b>Net fixed assets</b>              | <b>302.05</b>        | <b>267.53</b>        | <b>237.69</b>        | <b>211.89</b>        | <b>189.55</b>        |
| Preliminary expenses not written off | 6.84                 | 5.13                 | 3.42                 | 1.71                 | –                    |
| Inventories                          | 44.67                | 48.34                | 52.01                | 55.68                | 59.36                |
| Trade receivables                    | 75.67                | 81.98                | 88.29                | 94.59                | 100.90               |
| Cash and bank balance                | 73.87                | 124.09               | 182.56               | 249.23               | 323.90               |
| <b>Total assets</b>                  | <b>503.10</b>        | <b>527.07</b>        | <b>563.97</b>        | <b>613.10</b>        | <b>673.71</b>        |

## 15 Depreciation

Fixed assets are depreciated on the written-down value method, at 15% a year for plant and machinery, 10% for building and 10% for other assets. Land carries no depreciation.

Preliminary and pre-operative expenses are written off in equal parts over five years.

| Particulars (₹ lakh)                                        | Year 1<br>FY 2027-28 | Year 2<br>FY 2028-29 | Year 3<br>FY 2029-30 | Year 4<br>FY 2030-31 | Year 5<br>FY 2031-32 |
|-------------------------------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Building and civil works (cost ₹85.36 lakh, 10% WDV)</b> |                      |                      |                      |                      |                      |
| Opening written-down value                                  | 85.36                | 76.82                | 69.14                | 62.23                | 56.01                |
| Depreciation                                                | 8.54                 | 7.68                 | 6.91                 | 6.22                 | 5.60                 |
| Closing written-down value                                  | 76.82                | 69.14                | 62.23                | 56.01                | 50.41                |
| <b>Plant and machinery (cost ₹193.68 lakh, 15% WDV)</b>     |                      |                      |                      |                      |                      |
| Opening written-down value                                  | 193.68               | 164.63               | 139.94               | 118.95               | 101.11               |
| Depreciation                                                | 29.05                | 24.69                | 20.99                | 17.84                | 15.17                |
| Closing written-down value                                  | 164.63               | 139.94               | 118.95               | 101.11               | 85.94                |
| <b>Other fixed assets (cost ₹23.92 lakh, 10% WDV)</b>       |                      |                      |                      |                      |                      |
| Opening written-down value                                  | 23.92                | 21.53                | 19.38                | 17.44                | 15.70                |
| Depreciation                                                | 2.39                 | 2.15                 | 1.94                 | 1.74                 | 1.57                 |
| Closing written-down value                                  | 21.53                | 19.38                | 17.44                | 15.70                | 14.13                |
| <b>Total depreciation</b>                                   | <b>39.98</b>         | <b>34.52</b>         | <b>29.84</b>         | <b>25.80</b>         | <b>22.34</b>         |
| Preliminary expenses written off                            | 1.71                 | 1.71                 | 1.71                 | 1.71                 | 1.71                 |

## 16 Term loan repayment

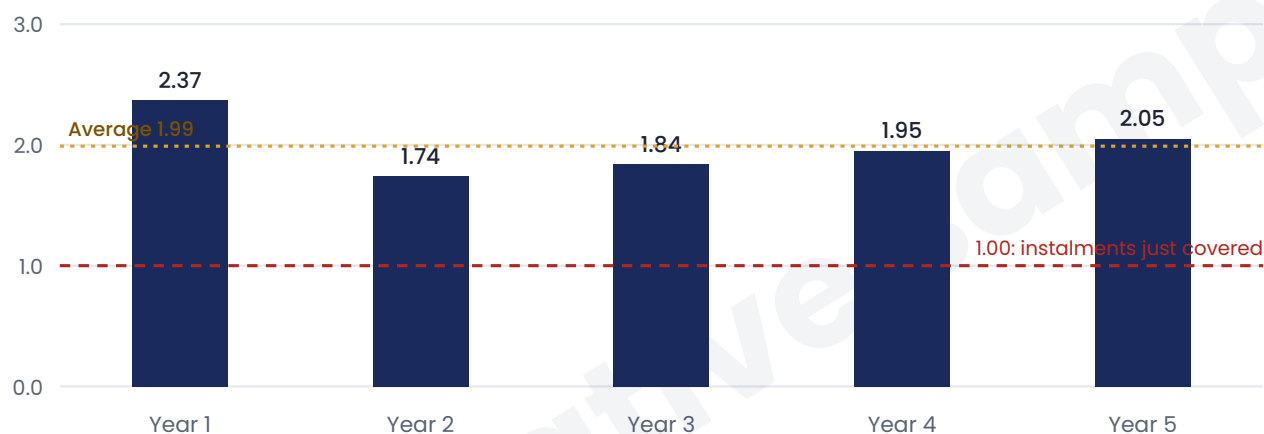
The term loan of ₹280.30 lakh carries interest at 10.5% a year. Only interest is paid during the 6-month moratorium, after which the loan is repaid in 54 equal monthly instalments of ₹6,53,553. The month-by-month schedule is in the annexure.

| Particulars (₹ lakh)   | Year 1<br>FY 2027-28 | Year 2<br>FY 2028-29 | Year 3<br>FY 2029-30 | Year 4<br>FY 2030-31 | Year 5<br>FY 2031-32 |
|------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Opening balance        | 280.30               | 255.26               | 201.08               | 140.92               | 74.14                |
| Interest               | 28.89                | 24.24                | 18.27                | 11.64                | 4.28                 |
| Principal repaid       | 25.04                | 54.18                | 60.16                | 66.78                | 74.14                |
| <b>Closing balance</b> | <b>255.26</b>        | <b>201.08</b>        | <b>140.92</b>        | <b>74.14</b>         | <b>—</b>             |

## 17 Debt service coverage

The debt service coverage ratio averages 1.99 over the repayment years, with a low of 1.74 in Year 2. A DSCR above 1 means the unit earns enough to meet its loan instalments, and the model keeps a margin above that in every year.

| Particulars (₹ lakh)                        | Year 1<br>FY 2027-28 | Year 2<br>FY 2028-29 | Year 3<br>FY 2029-30 | Year 4<br>FY 2030-31 | Year 5<br>FY 2031-32 |
|---------------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Net profit after tax                        | 57.22                | 75.84                | 94.76                | 113.60               | 132.44               |
| Depreciation and write-offs                 | 41.69                | 36.23                | 31.55                | 27.51                | 24.05                |
| Interest on term loan                       | 28.89                | 24.24                | 18.27                | 11.64                | 4.28                 |
| <b>Total available for debt service (A)</b> | <b>127.80</b>        | <b>136.31</b>        | <b>144.58</b>        | <b>152.75</b>        | <b>160.77</b>        |
| Principal repayment                         | 25.04                | 54.18                | 60.16                | 66.78                | 74.14                |
| Interest on term loan                       | 28.89                | 24.24                | 18.27                | 11.64                | 4.28                 |
| <b>Total debt service (B)</b>               | <b>53.93</b>         | <b>78.42</b>         | <b>78.43</b>         | <b>78.42</b>         | <b>78.42</b>         |
| <b>DSCR (A / B)</b>                         | <b>2.37</b>          | <b>1.74</b>          | <b>1.84</b>          | <b>1.95</b>          | <b>2.05</b>          |

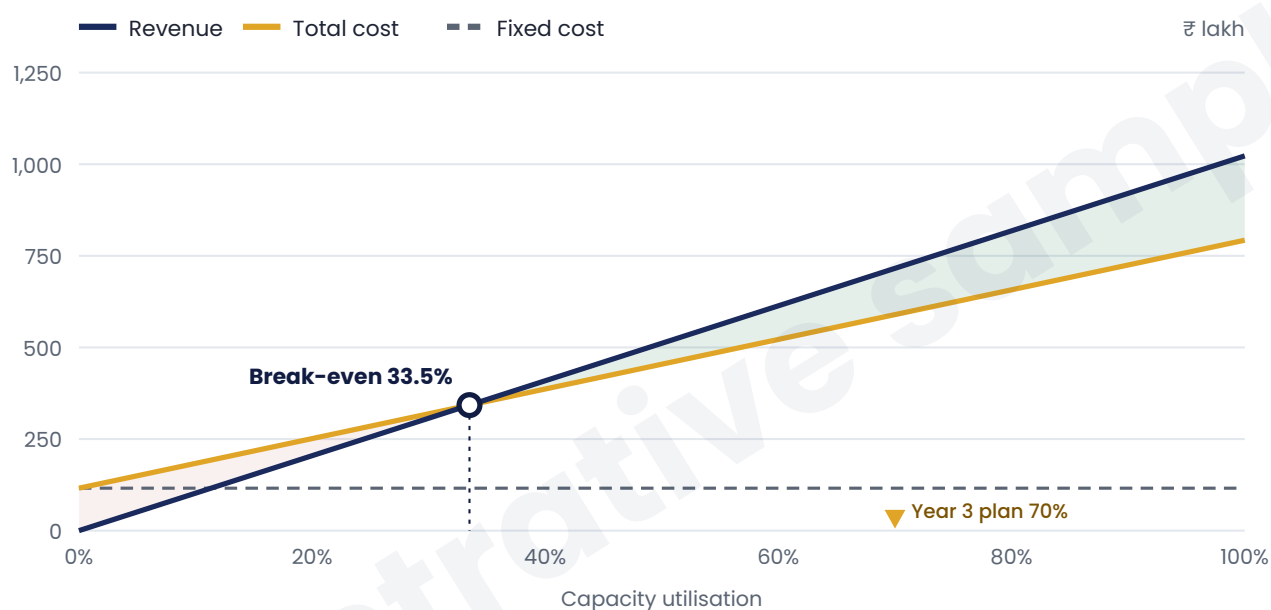


DSCR by year. A ratio above 1.00 means cash accruals cover the term loan instalments.

## 18 Break-even analysis

At Year 3 levels the unit breaks even at 33.5% of installed capacity, against planned utilisation of 70%. On a cash basis, leaving out depreciation and write-offs, break-even falls to 24.4%.

| Particulars (₹ lakh)                          | Year 1<br>FY 2027-28 | Year 2<br>FY 2028-29 | Year 3<br>FY 2029-30 | Year 4<br>FY 2030-31 | Year 5<br>FY 2031-32 |
|-----------------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Revenue from operations                       | 613.80               | 664.95               | 716.10               | 767.25               | 818.40               |
| Variable costs                                | 405.94               | 439.77               | 473.60               | 507.42               | 541.25               |
| <b>Contribution</b>                           | <b>207.86</b>        | <b>225.18</b>        | <b>242.50</b>        | <b>259.83</b>        | <b>277.15</b>        |
| Fixed costs (incl. depreciation and interest) | 131.57               | 124.06               | 116.16               | 108.36               | 100.56               |
| Break-even as % of installed capacity         | 38.0                 | 35.8                 | 33.5                 | 31.3                 | 29.0                 |
| Cash break-even as % of installed capacity    | 25.9                 | 25.4                 | 24.4                 | 23.3                 | 22.1                 |
| Break-even sales                              | 388.52               | 366.35               | 343.02               | 319.98               | 296.94               |



Break-even chart at Year 3 prices and costs, scaled to full capacity. Shaded areas show the loss zone (left) and profit zone (right).

## 19 Financial ratios

Liquidity and leverage improve over the projection. The current ratio stays at or above 2.00, while debt-equity drops from 1.77 to zero as the term loan is repaid.

| Ratio                                     | Year 1<br>FY 2027-28 | Year 2<br>FY 2028-29 | Year 3<br>FY 2029-30 | Year 4<br>FY 2030-31 | Year 5<br>FY 2031-32 |
|-------------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Current ratio                             | 2.00                 | 2.56                 | 3.17                 | 3.84                 | 4.55                 |
| Quick ratio                               | 1.54                 | 2.07                 | 2.66                 | 3.30                 | 3.99                 |
| Debt-equity ratio (term loan / net worth) | 1.77                 | 0.91                 | 0.44                 | 0.17                 | 0.00                 |
| Total outside liabilities / net worth     | 2.45                 | 1.36                 | 0.76                 | 0.41                 | 0.19                 |
| Interest coverage ratio                   | 3.09                 | 4.17                 | 5.88                 | 8.86                 | 15.81                |
| DSCR                                      | 2.37                 | 1.74                 | 1.84                 | 1.95                 | 2.05                 |
| Gross profit margin (%)                   | 31.3                 | 31.5                 | 31.6                 | 31.8                 | 31.9                 |
| Operating profit (EBITDA) margin (%)      | 25.2                 | 25.5                 | 25.7                 | 25.8                 | 26.0                 |
| Net profit margin (%)                     | 9.3                  | 11.4                 | 13.2                 | 14.8                 | 16.2                 |
| Return on capital employed (%)            | 24.1                 | 27.0                 | 28.8                 | 29.6                 | 29.6                 |
| Break-even (% of installed capacity)      | 38.0                 | 35.8                 | 33.5                 | 31.3                 | 29.0                 |

## 20 Key assumptions

- Commercial production starts in April 2027, and all assets are in use from the first year.
- Capacity utilisation of 60% in Year 1, rising to 80% by Year 5, over 330 working days a year.
- Selling price of ₹12,400 per MT, excluding GST, held constant through the projection.
- Raw materials at 50% of sales, packing materials at 4.9%, power and fuel at 7.9%, and selling and distribution at 3.4%.
- Wages and salaries rise by 5% a year; repairs and administrative overheads rise by 5% a year.
- Working capital based on 30 days of raw material, 2 days of work in progress, 15 days of finished goods and 45 days of receivables, less 30 days of creditors.
- Term loan at 10.5% interest with a 6-month moratorium and 54 monthly instalments; cash credit at 11% on 75% of the working capital requirement.
- Depreciation on the written-down value method at Income Tax Act rates; income tax at a flat 25% of profit for simplicity.
- Contingency of 5% on building and machinery; preliminary and pre-operative expenses written off over five years.
- All amounts in ₹ lakh unless stated otherwise, excluding GST.

## 21 Conclusion

In summary, the sample project needs ₹373.74 lakh, breaks even at 33.5% of capacity in Year 3 and repays its term loan from its own cash flow, with a payback period of about 3.3 years. A report for an actual project replaces these representative figures with local land and building costs, machinery quotations and a market survey for the chosen location.

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This document is a computer-generated illustrative sample. The capacity, prices, costs and projections are representative assumptions for a typical small-scale unit and are not based on any specific project, location or quotation. Statutory requirements change and vary by state. Niir Project Consultancy Services accepts no liability for decisions taken on the basis of this sample.

## A Annexure: monthly loan repayment schedule

Term loan of ₹280.30 lakh at 10.5% a year. Amounts in ₹ lakh.

| No. | Month    | Opening balance | Interest | Principal | Instalment | Closing balance |
|-----|----------|-----------------|----------|-----------|------------|-----------------|
| 1   | Apr 2027 | 280.30          | 2.45     | –         | 2.45       | 280.30          |
| 2   | May 2027 | 280.30          | 2.45     | –         | 2.45       | 280.30          |
| 3   | Jun 2027 | 280.30          | 2.45     | –         | 2.45       | 280.30          |
| 4   | Jul 2027 | 280.30          | 2.45     | –         | 2.45       | 280.30          |
| 5   | Aug 2027 | 280.30          | 2.45     | –         | 2.45       | 280.30          |
| 6   | Sep 2027 | 280.30          | 2.45     | –         | 2.45       | 280.30          |
| 7   | Oct 2027 | 280.30          | 2.45     | 4.08      | 6.54       | 276.22          |
| 8   | Nov 2027 | 276.22          | 2.42     | 4.12      | 6.54       | 272.10          |
| 9   | Dec 2027 | 272.10          | 2.38     | 4.15      | 6.54       | 267.94          |
| 10  | Jan 2028 | 267.94          | 2.34     | 4.19      | 6.54       | 263.75          |
| 11  | Feb 2028 | 263.75          | 2.31     | 4.23      | 6.54       | 259.53          |
| 12  | Mar 2028 | 259.53          | 2.27     | 4.26      | 6.54       | 255.26          |
| 13  | Apr 2028 | 255.26          | 2.23     | 4.30      | 6.54       | 250.96          |
| 14  | May 2028 | 250.96          | 2.20     | 4.34      | 6.54       | 246.62          |
| 15  | Jun 2028 | 246.62          | 2.16     | 4.38      | 6.54       | 242.24          |
| 16  | Jul 2028 | 242.24          | 2.12     | 4.42      | 6.54       | 237.83          |
| 17  | Aug 2028 | 237.83          | 2.08     | 4.45      | 6.54       | 233.37          |
| 18  | Sep 2028 | 233.37          | 2.04     | 4.49      | 6.54       | 228.88          |
| 19  | Oct 2028 | 228.88          | 2.00     | 4.53      | 6.54       | 224.34          |
| 20  | Nov 2028 | 224.34          | 1.96     | 4.57      | 6.54       | 219.77          |
| 21  | Dec 2028 | 219.77          | 1.92     | 4.61      | 6.54       | 215.16          |
| 22  | Jan 2029 | 215.16          | 1.88     | 4.65      | 6.54       | 210.51          |
| 23  | Feb 2029 | 210.51          | 1.84     | 4.69      | 6.54       | 205.81          |
| 24  | Mar 2029 | 205.81          | 1.80     | 4.73      | 6.54       | 201.08          |
| 25  | Apr 2029 | 201.08          | 1.76     | 4.78      | 6.54       | 196.30          |
| 26  | May 2029 | 196.30          | 1.72     | 4.82      | 6.54       | 191.48          |
| 27  | Jun 2029 | 191.48          | 1.68     | 4.86      | 6.54       | 186.62          |
| 28  | Jul 2029 | 186.62          | 1.63     | 4.90      | 6.54       | 181.72          |
| 29  | Aug 2029 | 181.72          | 1.59     | 4.95      | 6.54       | 176.78          |
| 30  | Sep 2029 | 176.78          | 1.55     | 4.99      | 6.54       | 171.79          |
| 31  | Oct 2029 | 171.79          | 1.50     | 5.03      | 6.54       | 166.75          |
| 32  | Nov 2029 | 166.75          | 1.46     | 5.08      | 6.54       | 161.68          |
| 33  | Dec 2029 | 161.68          | 1.41     | 5.12      | 6.54       | 156.56          |
| 34  | Jan 2030 | 156.56          | 1.37     | 5.17      | 6.54       | 151.39          |
| 35  | Feb 2030 | 151.39          | 1.32     | 5.21      | 6.54       | 146.18          |
| 36  | Mar 2030 | 146.18          | 1.28     | 5.26      | 6.54       | 140.92          |
| 37  | Apr 2030 | 140.92          | 1.23     | 5.30      | 6.54       | 135.62          |
| 38  | May 2030 | 135.62          | 1.19     | 5.35      | 6.54       | 130.27          |
| 39  | Jun 2030 | 130.27          | 1.14     | 5.40      | 6.54       | 124.88          |

| No. | Month    | Opening balance | Interest | Principal | Instalment | Closing balance |
|-----|----------|-----------------|----------|-----------|------------|-----------------|
| 40  | Jul 2030 | 124.88          | 1.09     | 5.44      | 6.54       | 119.43          |
| 41  | Aug 2030 | 119.43          | 1.05     | 5.49      | 6.54       | 113.94          |
| 42  | Sep 2030 | 113.94          | 1.00     | 5.54      | 6.54       | 108.41          |
| 43  | Oct 2030 | 108.41          | 0.95     | 5.59      | 6.54       | 102.82          |
| 44  | Nov 2030 | 102.82          | 0.90     | 5.64      | 6.54       | 97.18           |
| 45  | Dec 2030 | 97.18           | 0.85     | 5.69      | 6.54       | 91.50           |
| 46  | Jan 2031 | 91.50           | 0.80     | 5.73      | 6.54       | 85.76           |
| 47  | Feb 2031 | 85.76           | 0.75     | 5.79      | 6.54       | 79.98           |
| 48  | Mar 2031 | 79.98           | 0.70     | 5.84      | 6.54       | 74.14           |
| 49  | Apr 2031 | 74.14           | 0.65     | 5.89      | 6.54       | 68.26           |
| 50  | May 2031 | 68.26           | 0.60     | 5.94      | 6.54       | 62.32           |
| 51  | Jun 2031 | 62.32           | 0.55     | 5.99      | 6.54       | 56.33           |
| 52  | Jul 2031 | 56.33           | 0.49     | 6.04      | 6.54       | 50.28           |
| 53  | Aug 2031 | 50.28           | 0.44     | 6.10      | 6.54       | 44.19           |
| 54  | Sep 2031 | 44.19           | 0.39     | 6.15      | 6.54       | 38.04           |
| 55  | Oct 2031 | 38.04           | 0.33     | 6.20      | 6.54       | 31.84           |
| 56  | Nov 2031 | 31.84           | 0.28     | 6.26      | 6.54       | 25.58           |
| 57  | Dec 2031 | 25.58           | 0.22     | 6.31      | 6.54       | 19.27           |
| 58  | Jan 2032 | 19.27           | 0.17     | 6.37      | 6.54       | 12.90           |
| 59  | Feb 2032 | 12.90           | 0.11     | 6.42      | 6.54       | 6.48            |
| 60  | Mar 2032 | 6.48            | 0.06     | 6.48      | 6.54       | –               |