

PROJECT REPORT

Of

GLASS MIRROR

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **GLASS MIRROR MAKING UNIT**

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]



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PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : XXXXXXXX
- 2 Constitution (legal Status) : XXXXXXXX
- 3 Father's/Spouce's Name : XXXXXXXX
- 4 Unit Address : XXXXXXXX
- Taluk/Block: XXXXX
 District : XXXXX
 Pin: XXXXX
 E-Mail : XXXXX
 Mobile : XXXXX
- State:
- 5 Product and By Product : **Glass Mirror**
- 6 Name of the project / business activity proposed : **Glass Mirror**
- 7 Cost of Project : Rs25lac
- 8 Means of Finance
- | | |
|-------------------|------------------------------|
| Term Loan | Rs.17.42 Lacs |
| KVIC Margin Money | - As per Project Eligibility |
| Own Capital | Rs.2.5 Lacs |
| Working Capital | Rs.5.09 Lacs |
- 9 Debt Service Coverage Ratio : 2.87
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 6 Months
- 12 Break Even Point : 35%
- 13 Employment : 5 Persons
- 14 Power Requirement : 25.00 HP
- 15 Major Raw materials : **Glass Sheet**
- 16 Estimated Annual Sales Turnover : 61.56 Lacs
- 16 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lacs)

Particulars	Amount
Land	Rented/Owned
Building & Civil Work (5000 Sq Ft)	5.50
Plant & Machinery	13.00
Furniture & Fixtures	0.85
Pre-operative Expenses	-
Working Capital Requirement	5.65
Total	25.00

MEANS OF FINANCE

Particulars	Amount
Own Contribution @10%	2.50
Term Loan	17.42
Workign Capital Finance	5.09
Total	25.00

Beneficiary's Margin Monery (% of Project Cost)	General 10%	Special 5%
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PROJECT PROFILE ON GLASS MIRROR



INTRODUCTION

Glass Mirror is made of good quality sheet/plate glass of different thickness varying from 2 m.m. to 7m.m. being coated one side with chemical to give the desired reflectance. It is popularly used for looking purpose by one and all in day-to-day life. It has got certain industrial uses also.

MARKET

In view of the use of minerals, it can be said as an important and essential item without which one cannot imagine the present sophisticated modern life. This industry originated in Belgium and deep rooted in cosmopolitan cities of our country. In the household and new progressing industrial establishments, there is considerable demand for these mirrors. Mirrors are largely consumed by fancy shops, show rooms, theatres and offices in all toilets and bathroom etc.

It is an essential item in each and every house, since it is fragile it enjoys good replacement market also. Also the life of the present day silvering is only very few years. This adds to the replacement market based on the growing demand by the fancy of the people. The demand can be easily projected as follows keeping in mind, a conservative growth of 8%. The replacement demand to this product is estimated 5%.

On the export front there is a very good demand in south-eastern countries. Though, there are large numbers of unit in the country mostly in Firozabad (UP). There is further scope for setting up new units in this line of manufacture in view of the growing demand.

BASIS AND PRESUMPTION :

1. The proposed production of the unit is on single shift basis with 300 working days in a year.
2. The unit requires 1 to 2 months trial production to achieve full capacity.
3. The wages proposed in this profile are as per the prevailing wage practice.
4. Normal rate of interest of about 11.50% considered in the profile both for recurring and non-recurring investment.
5. Land value and construction cost has been taken on an average basis, sine it varies from place to place.
6. The cost of machinery and equipment has been proposed in the profile of the consulting the local machinery suppliers and traders.

IMPLEMENTATION SCHEDULE :

The different stages of implementation from conception of the project to commercial production is given below :

Sl. No.	Activity	Period
1.	Survey for collection of Data in respect of demand, Raw materials including Power, Fuel, and Pollution Control	8 Weeks
2.	Arrangement of Margin Money, preparation of project document and registration	4 Weeks
3.	Financial Assistance, Selection of Sites and Development of Land	12 Weeks
4.	Make Shift Office	4 Weeks
5.	Electricity, Fuel and Water tying up for availability	5 Weeks
6.	Selection of sheds and raw material, replacement of orders	6 Weeks
7.	Selection of machines and Placement of Order	4 Weeks
8.	Transportation and Installation of Machine and Equipments	6 Weeks
9.	Receipt of Raw-Materials	4 Weeks

TECHNICAL ASPECTS :

The most important process in the manufacturing of mirror is silvering on glass. The following various operation are involved in the process of manufacturing of mirrors :

- i. Selection of glass sheet.
- ii. Cleaning.
- iii. Sensitizing.
- iv. Silvering.
- v. Coppering
- vi. Painting.

Plate glass and sheet glass are cleaned by chemical process or by surface polishing to clean the surface contamination so as to give proper adherence.

They are given further treatment known as sensitizing makes the surface active for attracting the silver metal to form a quick adherence and uniform coating of film. Then the plate and sheet glasses are silvered either by spraying process or by pouring method. Then they are given copper coating to protective coating by painting either with red lead and varnish or cellulose enamel twin.

Quality Specification

The following specification have been formatted and published by the Bureau of Indian Standards for guidance in maintenance of the quality of the product :

IS:3438-1977 - Silvered glass mirror for general purpose (1strevision)

IS:6184-1971- Specification for furniture mirror (Re- affirmed 1987)

Production Quantity (Annual)

a.	Quantity	-	1200 Sq. mtr.
b.	Value	-	Rs. 44,02,000/-

Approximate Power Requirement **25 HP**

Pollution Control

There is not mare pollution in this industry. However, there should be proper arrangement for exhaust in spray booth, drainage for used water from the unit. It is advisable to collect the used water in cement tank and there should be proper arrangement of removal of such water at regular interval.

Energy Conservation

This industry uses only electric power, sample precautions and knowledge of effective utilisation of electric power is therefore necessary.

PROJECTED BALANCE SHEET

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>SOURCES OF FUND</u>					
Capital Account	2.50	2.50	2.50	2.50	2.50
Retained Profit	6.76	14.95	24.85	37.22	51.94
Term Loan	17.42	13.06	8.71	4.35	1.08
Cash Credit	5.09	5.09	5.09	5.09	5.09
Sundry Creditors	0.88	1.03	1.18	1.32	1.47
Provisions & Other Liab	0.36	0.40	0.44	0.48	0.53
TOTAL :	33.00	37.03	42.75	50.97	62.60
<u>APPLICATION OF FUND</u>					
Fixed Assets (Gross)	19.35	19.35	19.35	19.35	19.35
Gross Dep.	2.54	4.78	6.70	8.37	9.80
Net Fixed Assets	16.81	14.57	12.65	10.98	9.55
Current Assets					
Sundry Debtors	2.05	2.50	2.86	3.22	3.58
Stock in Hand	4.48	5.23	5.98	6.72	7.47
Cash and Bank	7.16	11.97	18.24	26.71	38.34
Deposits & Advances	2.50	2.75	3.03	3.33	3.66
TOTAL :	33.00	37.03	42.75	50.97	62.60

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PROJECTED CASH FLOW STATEMENT

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>SOURCES OF FUND</u>					
Share Capital	2.50	-			
Reserve & Surplus	6.76	9.10	12.37	15.47	18.40
Depriciation & Exp. W/off	2.54	2.23	1.93	1.66	1.44
Increase in Cash Credit	5.09	-	-	-	-
Increase In Term Loan	17.42	-	-	-	-
Increase in Creditors	0.88	0.15	0.15	0.15	0.15
Increase in Provisions	0.36	0.04	0.04	0.04	0.05
TOTAL :	35.55	11.52	14.48	17.32	20.03
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	19.35	-	-	-	-
Increase in Stock	4.48	0.75	0.75	0.75	0.75
Increase in Debtors	2.05	0.45	0.36	0.36	0.36
Increase in Deposits & Adv	2.50	0.25	0.28	0.30	0.33
Repayment of Term Loan	-	4.35	4.35	4.35	3.28
Taxation	-	0.91	2.47	3.09	3.68
TOTAL :	28.38	6.71	8.21	8.86	8.40
Opening Cash & Bank Balance	-	7.16	11.97	18.24	26.71
Add : Surplus	7.16	4.81	6.27	8.47	11.63
Closing Cash & Bank Balance	7.16	11.97	18.24	26.71	38.34

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
A) SALES					
Gross Sale	61.56	75.06	85.86	96.66	107.46
Total (A)	61.56	75.06	85.86	96.66	107.46
B) COST OF SALES					
Raw Mateiral Consumed	37.80	44.10	50.40	56.70	63.00
Electricity Expenses	2.15	2.51	2.86	3.22	3.58
Repair & Maintenance	-	0.75	0.86	0.97	1.07
Labour & Wages	7.79	8.57	9.42	10.37	11.40
Depriciation	2.54	2.23	1.93	1.66	1.44
Consumables and Other Expenses	1.23	1.50	1.72	1.93	2.15
Cost of Production	51.51	59.66	67.19	74.85	82.64
Add: Opening Stock /WIP	-	2.59	3.02	3.46	3.89
Less: Closing Stock /WIP	2.59	3.02	3.46	3.89	4.32
Cost of Sales (B)	48.92	59.23	66.76	74.42	82.21
C) GROSS PROFIT (A-B)	12.64	15.83	19.10	22.24	25.25
	21%	21%	22%	23%	23%
D) Bank Interest (Term Loan)	1.50	1.81	1.31	0.81	0.33
Bank Interest (C.C. Limit)	0.51	0.51	0.51	0.51	0.51
E) Salary to Staff	2.64	2.90	3.19	3.51	3.87
F) Selling & Adm Expenses Exp.	1.23	1.50	1.72	1.93	2.15
TOTAL (D+E)	5.88	6.73	6.73	6.77	6.85
H) NET PROFIT	6.76	9.10	12.37	15.47	18.40
I) Taxation	-	0.91	2.47	3.09	3.68
J) PROFIT (After Tax)	6.76	8.19	9.89	12.38	14.72

COMPUTATION OF MANUFACTURING OF GLASS MIRROR

Items to be Manufactured

Glass Mirror

Manufacturing Capacity per day	-	40.00	Sq Mt
	-		
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		12,000.00	Sq Mt
Year		Capacity	Sq Mt
		Utilisation	
IST YEAR		60%	7,200
IIND YEAR		70%	8,400
IIIRD YEAR		80%	9,600
IVTH YEAR		90%	10,800
VTH YEAR		100%	12,000

COMPUTATION OF RAW MATERIAL

Item Name		Quantity of	Recovery	Unit Rate of	Total Cost
		Raw Material		/Sq Mt	Per Annum (100%)
		Lts			
Raw Material #Average rates	100%	12,000.00	100%	525.00	63.00
#2mm Silvered Glass Mirror					
#3mm Silvered GlassMirror					
#4mm Silvered GlassMirror					
#5.5mm Silvered GlassMirror					
			Total (Rounded off in lacs)		63.00
Annual Consumption cost	(In Lacs)				63.00

Raw Material Consumed	Capacity Utilisation	Amount (Rs.)
IST YEAR	60%	37.80
IIND YEAR	70%	44.10
IIIRD YEAR	80%	50.40
IVTH YEAR	90%	56.70
VTH YEAR	100%	63.00

COMPUTATION OF SALE

Particulars	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
Op Stock	-	360	420	480	540
Production	7,200	8,400	9,600	10,800	12,000
	7,200	8,760	10,020	11,280	12,540
Less : Closing Stock	360	420	480	540	600
Net Sale	6,840	8,340	9,540	10,740	11,940
#Sale Price per Sq Mt (Average rates)	900.00	900.00	900.00	900.00	900.00
Sale (in Lacs)	61.56	75.06	85.86	96.66	107.46

COMPUTATION OF ELECTRICITY

(A) POWER CONNECTION				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	25	
Load Factor			0.7460	
Electricity Charges		per unit	8.00	
Total Working Days			300	
Electricity Charges (8 Hrs Per day)				3,58,080.00
Add : Minimim Charges (@ 10%)				
(B) D.G. SET				
No. of Working Days			300	days
No of Working Hours			-	Hour per day
Total no of Hour			-	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			-	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			-	
Add : Lube Cost @15%			-	
Total			-	
Total cost of Power & Fuel at 100%				3.58
Year		Capacity		Amount (in Lacs)
IST YEAR		60%		2.15
IIND YEAR		70%		2.51
IIIRD YEAR		80%		2.86
IVTH YEAR		90%		3.22
VTH YEAR		100%		3.58

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	IST YEAR	IIIND YEAR	IIIIRD YEAR	IVTH YEAR	VTH YEAR
Finished Goods					
(15 Days requirement)	2.59	3.02	3.46	3.89	4.32
Raw Material					
(15 Days requirement)	1.89	2.21	2.52	2.84	3.15
Closing Stock	4.48	5.23	5.98	6.72	7.47

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars			Total
			Amount
Stock in Hand			4.48
Sundry Debtors			2.05
		Total	6.53
Sundry Creditors			0.88
Working Capital Requirement			5.65
Margin			0.57
Working Capital Finance			5.09

BREAK UP OF LABOUR

Particulars		Wages	No of	Total
		Per Month	Employees	Salary
Skilled Worker		10,000.00	2	20,000.00
Semi skilled		8,000.00	3	24,000.00
Unskilled Worker		5,000.00	3	15,000.00
				59,000.00
Add: 10% Fringe Benefit				5,900.00
Total Labour Cost Per Month				64,900.00
Total Labour Cost for the year (In Rs. Lakhs)				7.79

BREAK UP OF SALARY

Particulars		Salary	No of	Total
		Per Month	Employees	Salary
Manager		12,000.00	1	12,000.00
Accountant		8,000.00	1	8,000.00
Total Salary Per Month				20,000.00
Add: 10% Fringe Benefit				2,000.00
Total Salary for the month				22,000.00
Total Salary for the year (In Rs. Lakhs)				2.64

COMPUTATION OF DEPRECIATION

Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		10.00%	15.00%	10.00%	
Opening Balance	Leased	-	-	-	-
Addition	-	5.50	13.00	0.85	19.35
	-	5.50	13.00	0.85	19.35
Less : Depreciation	-	0.55	1.95	0.04	2.54
WDV at end of Ist year	-	4.95	11.05	0.81	16.81
Additions During The Year	-	-	-	-	-
	-	4.95	11.05	0.81	16.81
Less : Depreciation	-	0.50	1.66	0.08	2.23
WDV at end of IIInd Year	-	4.46	9.39	0.73	14.57
Additions During The Year	-	-	-	-	-
	-	4.46	9.39	0.73	14.57
Less : Depreciation	-	0.45	1.41	0.07	1.93
WDV at end of IIIrd year	-	4.01	7.98	0.65	12.65
Additions During The Year	-	-	-	-	-
	-	4.01	7.98	0.65	12.65
Less : Depreciation	-	0.40	1.20	0.07	1.66
WDV at end of IV year	-	3.61	6.79	0.59	10.98
Additions During The Year	-	-	-	-	-
	-	3.61	6.79	0.59	10.98
Less : Depreciation	-	0.36	1.02	0.06	1.44
WDV at end of Vth year	-	3.25	5.77	0.53	9.55

REPAYMENT SCHEDULE OF TERM LOAN

11.5%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
IST YEAR	Opening Balance						
	Ist Quarter	-	17.42	17.42	-	-	17.42
	Iind Quarter	17.42	-	17.42	0.50	-	17.42
	IIIrd Quarter	17.42	-	17.42	0.50	-	17.42
	Ivth Quarter	17.42	-	17.42	0.50	-	17.42
					1.50	-	
IIND YEAR	Opening Balance						
	Ist Quarter	17.42	-	17.42	0.50	1.09	16.33
	Iind Quarter	16.33	-	16.33	0.47	1.09	15.24
	IIIrd Quarter	15.24	-	15.24	0.44	1.09	14.15
	Ivth Quarter	14.15		14.15	0.41	1.09	13.06
					1.81	4.35	
IIIRD YEAR	Opening Balance						
	Ist Quarter	13.06	-	13.06	0.38	1.09	11.97
	Iind Quarter	11.97	-	11.97	0.34	1.09	10.88
	IIIrd Quarter	10.88	-	10.88	0.31	1.09	9.80
	Ivth Quarter	9.80		9.80	0.28	1.09	8.71
					1.31	4.35	
IVTH YEAR	Opening Balance						
	Ist Quarter	8.71	-	8.71	0.25	1.09	7.62
	Iind Quarter	7.62	-	7.62	0.22	1.09	6.53
	IIIrd Quarter	6.53	-	6.53	0.19	1.09	5.44
	Ivth Quarter	5.44		5.44	0.16	1.09	4.35
					0.81	4.35	
VTH YEAR	Opening Balance						
	Ist Quarter	4.35	-	4.35	0.13	1.09	3.27
	Iind Quarter	3.27	-	3.27	0.09	1.09	2.18
	IIIrd Quarter	2.18	-	2.18	0.06	0.55	1.63
	Ivth Quarter	1.63		1.63	0.05	0.55	1.08
					0.33	3.28	

CALCULATION OF D.S.C.R

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>CASH ACCRUALS</u>	9.30	10.43	11.82	14.04	16.15
Interest on Term Loan	1.50	1.81	1.31	0.81	0.33
Total	10.80	12.24	13.13	14.85	16.48
<u>REPAYMENT</u>					
Instalment of Term Loan	4.35	4.35	4.35	3.28	3.28
Interest on Term Loan	1.50	1.81	1.31	0.81	0.33
Total	5.86	6.17	5.67	4.09	3.61
DEBT SERVICE COVERAGE RATIO	1.85	1.98	2.32	3.63	4.57
AVERAGE D.S.C.R.			2.87		

BREAK EVEN POINT ANALYSIS

Year	I	II	III	IV	V
Net Sales & Other Income	61.56	75.06	85.86	96.66	107.46
Less : Op. WIP Goods	-	2.59	3.02	3.46	3.89
Add : Cl. WIP Goods	2.59	3.02	3.46	3.89	4.32
Total Sales	64.15	75.49	86.29	97.09	107.89
Variable & Semi Variable Exp.					
Raw Material & Tax	37.80	44.10	50.40	56.70	63.00
Electricity Exp/Coal Consumption at 85%	1.83	2.13	2.43	2.74	3.04
Manufacturing Expenses 80%	0.98	1.80	2.06	2.32	2.58
Wages & Salary at 60%	6.26	6.88	7.57	8.33	9.16
Selling & administrative Expenses 80%	0.98	1.20	1.37	1.55	1.72
Intt. On Working Capital Loan	0.51	0.51	0.51	0.51	0.51
Total Variable & Semi Variable Exp	48.36	56.62	64.35	72.14	80.01
Contribution	15.79	18.87	21.94	24.95	27.88
Fixed & Semi Fixed Expenses					
Manufacturing Expenses 20%	0.25	0.45	0.52	0.58	0.64
Electricity Exp/Coal Consumption at 15%	0.32	0.38	0.43	0.48	0.54
Wages & Salary at 40%	4.17	4.59	5.05	5.55	6.11
Interest on Term Loan	1.50	1.81	1.31	0.81	0.33
Depreciation	2.54	2.23	1.93	1.66	1.44
Selling & administrative Expenses 20%	0.25	0.30	0.34	0.39	0.43
Total Fixed Expenses	9.03	9.76	9.58	9.48	9.48
Capacity Utilization	60%	70%	80%	90%	100%
OPERATING PROFIT	6.76	9.10	12.37	15.47	18.40
BREAK EVEN POINT	34%	36%	35%	34%	34%
BREAK EVEN SALES	36.69	39.06	37.66	36.89	36.70

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