

PROJECT REPORT

Of

LAMINATED SAFETY GLASS

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Laminated Safety Glass.

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 : xxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxx
- Pin: xxxxxx State: xxxxxxxxx
- Mobile xxxxxx
- 5 Product and By Product : **LAMINATED SAFETY GLASS**
- 6 Name of the project / business activity proposed : **LAMINATED SAFETY GLASS UNIT**
- 7 Cost of Project : Rs.20.22 Lakhs
- 8 Means of Finance :
 Term Loan Rs.11.7 Lakhs
 Own Capital Rs.2.02 Lakhs
 Working capital Rs.6.5 Lakhs
- 9 Debt Service Coverage Ratio : 2.98
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 23%
- 13 Employment : 8 Persons
- 14 Power Requirement : 20.00 HP
- 15 Major Raw materials : 3mm thickness sheet float glass, PVC Sheet, Lamination Chemicals, Packing material
- 16 Estimated Annual Sales Turnover (Max Capacity) : 112.14 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)

Particulars	Amount
Land	Own/Rented
Building / Shed 1500 Sq ft	6.00
Plant & Machinery	5.50
Furniture & Fixtures	1.50
Working Capital	7.22
Total	20.22

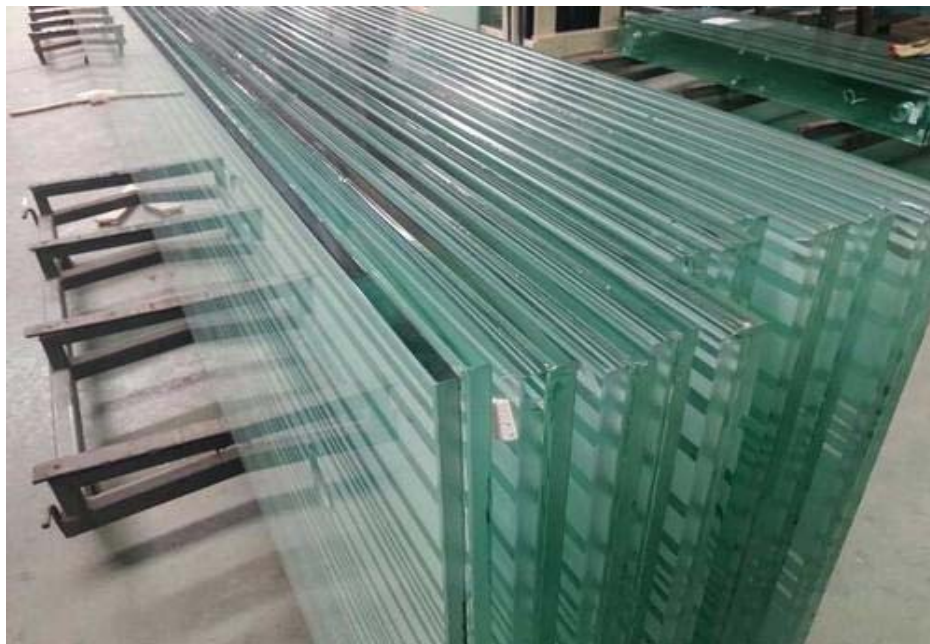
MEANS OF FINANCE

Particulars	Amount
Own Contribution	2.02
Working Capital(Finance)	6.50
Term Loan	11.70
Total	20.22

LAMINATED SAFETY GLASS

Introduction: Laminated safety glass is a sandwich made up of a PVC interlayer or inter layers adhered between two glass sheets. Laminated glass is more resistant to fracture than monolithic glass, but in case of fracture, the PVC interlayer holds the fragments in place. Laminated safety glass has good industrial potential due to its multiple advantages in commercial and industrial applications though the product is not as popular as toughened glass. The main applications of laminated safety glass are:

- Automobile
- Railways
- Marine Vessels
- Aircraft
- Household Construction appliances & other Industrial applications



Advantages & Market Potential: The main advantages of Laminated safety glass are:

- On accidents the glass does not harm/ injure the body.
- It acts as a good insulator
- It is sound proof
- It has got a good strength compared to toughened and other sheet glasses.

There is a very good demand for setting up this product in small scale sector, in commercial and industrial applications. The main consumer of these products are Railways, Automobiles, Defence, Aircrafts, Marine vessels and in domestic applications. The growth of laminated safety glass industry depends upon the development of automobile industry and also in construction of multi-storeyed buildings. As the automobile industry is steadily growing, the demand for laminated safety glass is also increasing. Besides this, there is considerable demand for laminated safety glass as spares for replacement purposes. Therefore, there is good scope for setting up new units.

Raw material: Major raw materials are as follows:

1. 3mm thickness sheet float glass
2. PVC Sheet
3. Lamination Chemicals
4. Packing material

Machinery Requirements: Major machines and equipments are as follows:

S No.	Name	Quantity	Amount
1.	Glass washing and drying machine with Blower	1	60000
2.	Hand operated glass lamination machine	1	190000

	with accessories		
3.	Edge cutting & finishing machine	2	80000
4.	Glass cutting machine with arm table cutting rail and swivel cutting head (For shaping)	1	80000
5.	Electric oven size 8x8x8 with fan and temp. indicator	1	70000
6.	Racks for raw sheet glass	Ls	20000
7.	Other equipments & hand tools	Ls	50000
	Total Amount		550000

Manufacturing Process: The raw materials for manufacturing the laminated safety glass are ordinary sheet glass/float glass and PVC sheet. Sheet glass/float glass suitable for this product should be of good quality i.e. free from stone, weariness, stresses, strains, scratches and other surface defects. The important stages in the manufacture of laminated sheet glass are:

- Raw glass sheet inspection
- Glass Cutting
- Glass Washing
- PVC Interlayer Cutting
- Preparing the resin
- Assembly of sheet glass and interlayer
- Pouring resin on each side of the PVC between it and the glass
- Rolling & pressing
- Drying
- Edge Finishing
- Final Inspection & Packing

Area: The industrial setup requires space for Inventory, workshop or manufacturing area, space for power supply utilities and auxiliary like Generator setup. Also some of the area of building is required for office staff facilities, documentation, office furniture, etc. Thus, the approximate total area

required for complete industrial setup is 2500 to 3000Sqft. Civil work cost will be Rs 6 Lac (Approx.)

Power Requirement: The power consumption required to run all the machinery could be approximated as 20 Hp

Manpower Requirement: There are requirement of skilled machine operators to run the machine set. Experience quality engineers are required for desired quality control. Some helpers are also required to transfer the material from one work station to other. Office staffs are required to maintain the documentation. The approximate manpower required is 8 including 1 Supervisor, 1 Plant Operator, 1 unskilled worker, 1 Helper and 1 Security guard. 3 Skilled worker including Accountant, Manager and Sales person.

Bank Term Loan: Rate of Interest is assumed to be at 11%

Depreciation: Depreciation has been calculated as per the Provisions of Income Tax Act, 1961

Approvals & Registration Requirement:

Basic registration required in this project:

- GST Registration
- Udyog Aadhar Registration (Optional)
- Choice of a Brand Name of the product and secure the name with Trademark if require.
- NOC from State Pollution Control Board

Implementation Schedule:

S No.	Activity	Time required
1.	Acquisition of premises	1-2 Months
2.	Procurement & installation of Plant & Machinery	1-2 Months
3.	Arrangement of Finance	1.5-2 Months
4.	Requirement of required Manpower	1 Month
5.	Commercial Trial Runs	1 Month
	Total time Required (some activities shall run concurrently)	5-6 Months

FINANCIALS

PROJECTED BALANCE SHEET					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Capital Account					
Opening Balance	-	3.64	6.68	9.80	12.47
Add: Additions	2.02	-	-	-	-
Add: Net Profit	4.62	6.54	7.61	8.17	9.04
Less: Drawings	3.00	3.50	4.50	5.50	6.00
Closing Balance	3.64	6.68	9.80	12.47	15.51
CC Limit	6.50	6.50	6.50	6.50	6.50
Term Loan	10.40	7.80	5.20	2.60	0.00
Sundry Creditors	1.07	1.27	1.41	1.55	1.69
TOTAL :	21.61	22.25	22.91	23.12	23.70
APPLICATION OF FUND					
Fixed Assets (Gross)	13.00	13.00	13.00	13.00	13.00
Gross Dep.	1.58	2.95	4.15	5.21	6.13
Net Fixed Assets	11.43	10.05	8.85	7.79	6.87
Current Assets					
Sundry Debtors	3.16	3.83	4.29	4.76	5.23
Stock in Hand	5.33	6.23	6.95	7.68	8.41
Cash and Bank	1.71	2.14	2.82	2.89	3.19
TOTAL :	21.61	22.25	22.91	23.12	23.70

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PROJECTED PROFITABILITY STATEMENT					
PARTICULARS	I	II	III	IV	V
A) SALES					
Gross Sale	67.65	82.13	92.00	102.00	112.14
Total (A)	67.65	82.13	92.00	102.00	112.14
B) COST OF SALES					
Raw Material Consumed	46.00	54.34	60.38	66.41	72.45
Electricity Expenses	1.29	1.45	1.61	1.77	1.93
Repair & Maintenance	2.37	2.46	2.76	3.06	3.36
Labour & Wages	6.55	6.88	7.57	8.70	10.01
Depreciation	1.58	1.38	1.20	1.05	0.92
Cost of Production	57.78	66.51	73.52	81.00	88.68
Add: Opening Stock/WIP	-	3.03	3.51	3.93	4.35
Less: Closing Stock/WIP	3.03	3.51	3.93	4.35	4.79
Cost of Sales (B)	54.76	66.02	73.10	80.58	88.25
C) GROSS PROFIT (A-B)	12.89	16.11	18.90	21.42	23.89
	19.05%	19.61%	20.54%	21.00%	21.30%
D) Bank Interest (Term Loan)	1.27	1.04	0.75	0.46	0.18
ii) Interest On Working Capital	0.72	0.72	0.72	0.72	0.72
E) Salary to Staff	3.78	4.54	5.44	6.53	7.84
F) Selling & Adm Expenses Exp.	1.35	1.64	1.84	2.04	2.24
TOTAL (D+E)	7.12	7.93	8.75	9.75	10.97
H) NET PROFIT	5.77	8.18	10.15	11.67	12.92
I) Taxation	1.15	1.64	2.54	3.50	3.87
J) PROFIT (After Tax)	4.62	6.54	7.61	8.17	9.04

PROJECTED CASH FLOW STATEMENT					
PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
Own Contribution	2.02	-			
Reserve & Surplus	5.77	8.18	10.15	11.67	12.92
Depriciation & Exp. W/off	1.58	1.38	1.20	1.05	0.92
Increase In Cash Credit	6.50				
Increase In Term Loan	11.70	-	-	-	-
Increase in Creditors	1.07	0.19	0.14	0.14	0.14
TOTAL :	28.64	9.75	11.49	12.87	13.98
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	13.00	-	-	-	-
Increase in Stock	5.33	0.90	0.72	0.73	0.73
Increase in Debtors	3.16	0.68	0.46	0.47	0.47
Repayment of Term Loan	1.30	2.60	2.60	2.60	2.60
Taxation	1.15	1.64	2.54	3.50	3.87
Drawings	3.00	3.50	4.50	5.50	6.00
TOTAL :	26.94	9.31	10.82	12.80	13.68
Opening Cash & Bank Balance	-	1.71	2.14	2.82	2.89
Add : Surplus	1.71	0.44	0.68	0.07	0.30
Closing Cash & Bank Balance	1.71	2.14	2.82	2.89	3.19

COMPUTATION OF MAKING OF LAMINATED SAFETY GLASS			
Item to be Manufactured Laminated Safety Glass			
Manufacturing Capacity per day		46	Sqmt
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		13,800	Sqmt
Total Production per Annum		13,800	Sqmt
Year		Capacity	LAMINATED SAFETY GLASS
		Utilisation	
I		40%	5,520.00
II		45%	6,210.00
III		50%	6,900.00
IV		55%	7,590.00
V		60%	8,280.00

COMPUTATION OF RAW MATERIAL					
Item Name	Quantity of Raw Material	Unit	Unit Rate	Total CostPer Annum (100%)	
3mm Thickness Sheet float glass	30,000.00	sqmt	300.00	90,00,000.00	
PVC Sheet	15,000.00	sqmt	100.00	15,00,000.00	
Lamination Chemicals	Lumsum			5,00,000.00	
Packing material	Lumsum			5,00,000.00	
Total				1,15,00,000.00	
Total Raw material in Rs lacs				115.00	

Raw Material Consumed	Capacity Utilisation	Amount (Rs.)	
I	40%	46.00	
II	45%	54.34	5% Increase in Cost
III	50%	60.38	5% Increase in Cost
IV	55%	66.41	5% Increase in Cost
V	60%	72.45	5% Increase in Cost

COMPUTATION OF SALE					
Particulars	I	II	III	IV	V
Op Stock	-	276.00	310.50	345.00	379.50
Production	5,520.00	6,210.00	6,900.00	7,590.00	8,280.00
	5,520.00	6,486.00	7,210.50	7,935.00	8,659.50
Less : Closing Stock(15 Days)	276.00	310.50	345.00	379.50	414.00
Net Sale	5,244.00	6,175.50	6,865.50	7,555.50	8,245.50
Sale Price per Sqmt.	1,290.00	1,330.00	1,340.00	1,350.00	1,360.00
Sale (in Lacs)	67.65	82.13	92.00	102.00	112.14

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					
PARTICULARS	I	II	III	IV	V
Finished Goods					
(15 Days requirement)	3.03	3.51	3.93	4.35	4.79
Raw Material					
(15 Days requirement)	2.30	2.72	3.02	3.32	3.62
Closing Stock	5.33	6.23	6.95	7.68	8.41

COMPUTATION OF WORKING CAPITAL REQUIREMENT			
Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	5.33		
Less:			
Sundry Creditors	1.07		
Paid Stock	4.25	0.43	3.83
Sundry Debtors	3.16	0.32	2.84
Working Capital Requirement			6.67
Margin			0.74
MPBF			6.67
Working Capital Demand			6.50

<u>BREAK UP OF LABOUR</u>				
Particulars		Wages	No of	Total
		Per Month	Employees	Salary
Supervisor		16,000.00	1	16,000.00
Plant Operator		12,000.00	1	12,000.00
Unskilled Worker		10,000.00	1	10,000.00
Helper		8,000.00	1	8,000.00
Security Guard		6,000.00	1	6,000.00
				52,000.00
Add: 5% Fringe Benefit				2,600.00
Total Labour Cost Per Month				54,600.00
Total Labour Cost for the year (In Rs. Lakhs)			5	6.55

<u>BREAK UP OF SALARY</u>				
Particulars		Salary	No of	Total
		Per Month	Employees	Salary
Manager		12,000.00	1	12,000.00
Accountant cum store keeper		10,000.00	1	10,000.00
Sales		8,000.00	1	8,000.00
Total Salary Per Month				30,000.00
Add: 5% Fringe Benefit				1,500.00
Total Salary for the month				31,500.00
Total Salary for the year (In Rs. Lakhs)			3	3.78

COMPUTATION OF DEPRECIATION					
Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		10.00%	15.00%	10.00%	
Opening Balance	Leased		-	-	-
Addition	-	6.00	5.50	1.50	13.00
	-	6.00	5.50	1.50	13.00
		-	-	-	
TOTAL		6.00	5.50	1.50	13.00
Less : Depreciation	-	0.60	0.83	0.15	1.58
WDV at end of Ist year	-	5.40	4.68	1.35	11.43
Additions During The Year	-	-	-	-	-
	-	5.40	4.68	1.35	11.43
Less : Depreciation	-	0.54	0.70	0.14	1.38
WDV at end of IInd Year	-	4.86	3.97	1.22	10.05
Additions During The Year	-	-	-	-	-
	-	4.86	3.97	1.22	10.05
Less : Depreciation	-	0.49	0.60	0.12	1.20
WDV at end of IIIrd year	-	4.37	3.38	1.09	8.85
Additions During The Year	-	-	-	-	-
	-	4.37	3.38	1.09	8.85
Less : Depreciation	-	0.44	0.51	0.11	1.05
WDV at end of IV year	-	3.94	2.87	0.98	7.79
Additions During The Year	-	-	-	-	-
	-	3.94	2.87	0.98	7.79
Less : Depreciation	-	0.39	0.43	0.10	0.92
WDV at end of Vth year	-	3.54	2.44	0.89	6.87

REPAYMENT SCHEDULE OF TERM LOAN							11.0%
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	11.70	11.70	0.32	-	11.70
	IInd Quarter	11.70	-	11.70	0.32	-	11.70
	IIIrd Quarter	11.70	-	11.70	0.32	0.65	11.05
	Ivth Quarter	11.05	-	11.05	0.30	0.65	10.40
					1.27	1.30	
II	Opening Balance						
	Ist Quarter	10.40	-	10.40	0.29	0.65	9.75
	IInd Quarter	9.75	-	9.75	0.27	0.65	9.10
	IIIrd Quarter	9.10	-	9.10	0.25	0.65	8.45
	Ivth Quarter	8.45		8.45	0.23	0.65	7.80
					1.04	2.60	
III	Opening Balance						
	Ist Quarter	7.80	-	7.80	0.21	0.65	7.15
	IInd Quarter	7.15	-	7.15	0.20	0.65	6.50
	IIIrd Quarter	6.50	-	6.50	0.18	0.65	5.85
	Ivth Quarter	5.85		5.85	0.16	0.65	5.20
					0.75	2.60	
IV	Opening Balance						
	Ist Quarter	5.20	-	5.20	0.14	0.65	4.55
	IInd Quarter	4.55	-	4.55	0.13	0.65	3.90
	IIIrd Quarter	3.90	-	3.90	0.11	0.65	3.25
	Ivth Quarter	3.25		3.25	0.09	0.65	2.60
					0.46	2.60	
V	Opening Balance						
	Ist Quarter	2.60	-	2.60	0.07	0.65	1.95
	IInd Quarter	1.95	-	1.95	0.05	0.65	1.30
	IIIrd Quarter	1.30	-	1.30	0.04	0.65	0.65
	Ivth Quarter	0.65		0.65	0.02	0.65	- 0.00
					0.18	2.60	

Door to Door Period 60 Months
Moratorium Period 6 Months
Repayment Period 54 Months

CALCULATION OF D.S.C.R					
PARTICULARS	I	II	III	IV	V
CASH ACCRUALS	6.19	7.92	8.82	9.22	9.96
Interest on Term Loan	1.27	1.04	0.75	0.46	0.18
Total	7.46	8.96	9.57	9.69	10.14
REPAYMENT					
Repayment of Term Loan	1.30	2.60	2.60	2.60	2.60
Interest on Term Loan	1.27	1.04	0.75	0.46	0.18
Total	2.57	3.64	3.35	3.06	2.78
DEBT SERVICE COVERAGE RATIO	2.90	2.46	2.86	3.16	3.65
AVERAGE D.S.C.R.			2.98		

COMPUTATION OF ELECTRICITY				
(A) POWER CONNECTION				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	20	
Load Factor			0.7460	
Electricity Charges		per unit	7.50	
Total Working Days			300	
Electricity Charges				2,68,560.00
Add : Minimim Charges (@ 10%)				
(B) DG set				
No. of Working Days			300	days
No of Working Hours			0.3	Hour per day
Total no of Hour			90	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			720	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			0.47	
Add : Lube Cost @15%			0.07	
Total			0.54	
Total cost of Power & Fuel at 100%				3.22
Year		Capacity		Amount
				(in Lacs)
I		40%		1.29
II		45%		1.45
III		50%		1.61
IV		55%		1.77
V		60%		1.93

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