

PRE-FEASIBILITY REPORT FOR THE PRODUCTION OF LEAD FREE FRIT FOR CERAMIC INDUSTRY

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1. Introduction of Technology/Process/Product:

Name of Technology/Process/Product: Development of technology for the production of lead free frit for ceramic industry

Summary (Project brief (Local/International Perspective):

Frit is a low temperature glass which is produced by melting different raw materials and chemicals in definite proportion, mixing them thoroughly, melting the mass at 1450°C and quenching in cold water for bringing it in the form of soft glass. To this glass 5% clay (alongwith 50-60% water) is added to form a slip for glazing the ceramics ware. Presently, the good quality of such frit is being imported for which we have to spend foreign exchange and price is also high as compared to the frit developed at PCSIR.

2. Main Parameters of Technology/Process/Product:

Main Feature -

Input (Raw materials with specifications) Quartz, Feldspar, Limestone, Barium Carbonate, Potassium Nitrate, Borax, Sodium Carbonate & Zinc Oxide

Output (Products, byproducts with specifications) Transparent Lead free frit

Applications/Uses Tile and Sanitary ware industries for glazing purpose

Trial Results -

Technical data (Proposed capacity, Production time per batch, packing size)-

Production process

Flow diagrams	Can be provided on demand
Equipment layout diagrams	Can be provided on demand
Machinery required with specifications	Can be provided on demand
Standards specifications & test methods	Can be provided on demand
Quality control equipment with specifications	Can be provided on demand
Environmental impact	The product is environment friendly
Availability of technical support	Available
Available Brochures/Pamphlets	Available
Status of registration/Patent/Trade Mark	N.A

3. Estimation of Fixed Capital Investment (PKR):

Land	Depends on location
Building	Depends on location
Furniture & Fixture (Office/Factory)	Depends on location
Plant & Machinery	Depends on capacity
Technology Transfer Fee	Rs.7.5 million (Negotiable)
Total Fixed Cost of the Project	-
Add: Working Capital	-
Total Project Cost:	-

4. Marketing Aspects:

Total industry and annual growth	N.A
Current demand	Demand can be increased through publicity and awareness
Local production facilities	N.A
Imports	Chinese frit being imported containing lead
Major users	Tile and Sanitary ware industries
Marketing strategy	<ul style="list-style-type: none">• Hold regional exhibitions & seminars• Publicity through electronic & multi media

5. Details of Costs:

Direct production Costs (for production of 850 Kg. frit per batch):

Raw materials cost per unit: Rs.25,915/batch

Direct Wages Cost per unit: Rs.3,000/batch

Production overheads cost per unit: -

Admin & Selling Expenses: -

Salaries & Benefits per month: Rs.200,000/- approx.

Utilities charges per month: Rs.300,000/- approx.

Communication expenses per month: -

Other expenses per month: -

Publicity and advertisement expenses per month: -