

PROJECT PROFILE – SUMMARY SHEET

Project Introduction

1. Project title: **Production of precipitated calcium carbonate(CaCO₃)**
2. Sector :construction of chemical substances and products(24) construction of basic chemical substances except for a variety of fertilizer and nitrogen compounds (2411)
3. Products/Services: **Production of precipitated calcium carbonate(CaCO₃)**
4. Location: Free zone Economic special zone Industrial Estate Main Land
5. Project description:

The main goal of carrying out this plan is establishment of production unit of precipitated calcium carbonate in Lorestan province.

The products of this unit , medicine grade calcium carbonate under 2 microns and above 5000 meshes with 100,000 tons capacity, industrial grade calcium carbonate above 2 microns and 5000 meshes downward with 100,000 tons capacity that totally 200,000 ton capacity was considered for this production unit.
6. Annual capacity: 200,000 tons.

Project Status

7. Local / internal raw material access inside of country or province: 100% of the materials are supplied in the country .
8. Sale:
 Anticipated internal market: 50% Anticipated export market:50%
9. Construction Period (from beginning of activity to commercial activity): 24 months

Schedule

Beginning of activity:
 In-site beginning of activity:
 End of project:
 Commercial activity beginning:

10. Project Status:

- Feasibility study available? Yes No
- Required land provided? Yes No
- Legal permissions (establishment license, environment, etc) taken? Yes No
- Partnership agreement concluded with local/foreign investor? Yes No
- Financing agreement concluded? Yes No
- Agreement with local / foreign contractor(s) concluded? Yes No
- Infrastructural utilities (electricity, water supply, telecommunication, fuel, road, etc) procured? Yes No
- List of know-how, machinery, equipment, as well as seller / builder companies defined? Yes No
- Purchase agreement for machinery, equipment and technology concluded? Yes No

1



Financial Structure

11. Finance

Description	Required Local Currency			Required Foreign Currency (Thousand Dollar)	Total in Thousand Dollar
	Million Rials	Rate	Equivalent in Thousand Dollar		
Fix Capital	195,849	87000 Rials for each Dollar	2251	25312	27563
Working Capital	69,251		796	0	796
Total Investment	265,100		3047	25312	28359

- Value of local equipment/machinery: thousand dollars
- Value of foreign equipment/machinery: 22364 thousand dollars
- Value of foreign technology: 1600 thousand dollars
- Value of local technology:Million dollars
- Net Present Value (NPV): **1,420,232** Million Rials for 10 Years, discount rate: 20%
- Internal Rate of Return (IRR): 31,96%
- Payback Period (PP): 33,33%

General Information

12. Project Type: Establishment Expansion and completion

13. Company Profile:

- Name (legal /natural persons):
- Current activity of company:
- Address:

2

-Tel: Fax:
-E-mail: Web site:
-Legal structure of company: private sector public sector other

Please attach follow documents if available

- Pre-feasibility study
- Feasibility study
- Legal permissions (establishment license, foreign currency quota, environment, etc)

Plan name: Production of precipitated calcium carbonate(CaCO₃)

Product introduction

The goal of carrying out this plan is establishment of production unit of precipitated calcium carbonate in Lorestan province with capacity of 200,000 tons in a year.

ISIC Code of this plan products 2411512438 (and 8-digit code 24112023) and 2411512430 (and 8-digit code 24112012) from construction group of chemical substances and products (24) and subgroups of construction of basic chemical substances except for a variety of fertilizer and nitrogen compounds (2411), inorganic carbon compounds (2411312426), carbonates and bicarbonates (2411412427).

Calcium carbonate , under subchapters of tariff 2863, Iran's customs named carbonates, Peroxo carbonates (high carbonate), commercial Ammonium carbonate which has Ammonium Carbamate , is imported and exported with sub Tariff 2836500.

Its entry requirements are having permission of Ministry of commerce and Ministry of Industry, Mine and Trade, paying 10 percent of entrance fees (tariff) in 2018 (customs 4% and business profit 1%).

Introduction of product applications

Calcium carbonate as a filler includes natural powders, precipitated products and dolomite which are widely used in different industries.

The main applications of precipitated calcium carbonate are: paper, paint and surface covers, plastics, a variety of glue, spackle substances, polymers, chemical fertilizer, livestock food, food industries, medicine industries, cosmetic industry, pesticides and poisons, cleansers, glass and ceramic, desulfurization from gases and water purification.

Proposed places for plan

According to benefits of establishment in industrial estates and areas, industrial estates of Lorestan province are suggested for conducting the project.

Raw, auxiliary and packing materials

Required raw materials of production unit are as follows:

Raw, auxiliary and packing materials

No	Raw , auxiliary and packing materials	Unit	Consumption rate per year	Spoilage	Sum of raw and consuming materials	Unit price (Rial)	Annual cost (m/r)
1	limestone	ton	400,000	0	400,000	152,000	60,800
2	stearic acid	ton	5,000	0	5,000	76,000,000	380,000
3	25-kilogram polypropylene two-shell woven bag	number	8,000,000	160000	8,160,000	12,000	97,920
4	consuming oil	ton	25	0	25	57,000,000	1,425
5	consuming grease	ton	10	0	10	102,600,000	1,026
6	coke	ton	60,000	0	60,000	5,130,000	307,800
Total							848,971

Sales plan

Sales plan in the first 5 years is as follows:

Sales plan in the first 5 years

Description	First year	Second year	Third year	Forth year	Fifth year
Production percent	70%	80%	90%	90%	90%
precipitated calcium carbonate(sales/m.r)	350,000	400,000	450,000	450,000	450,000

Description	First year	Second year	Third year	Forth year	Fifth year
Production percent	70%	80%	90%	90%	90%
medicine – grade precipitated calcium carbonate (sales/m.r)	1,330,000	1,520,000	1,710,000	1,710,000	1,710,000
precipitated calcium carbonate(capacity/ton)	70,000	80,000	90,000	90,000	90,000
medicine – grade precipitated calcium carbonate(capacity/ton)	70,000	80,000	90,000	90,000	90,000
Total (sales/m.r)	1,680,000	1,920,000	2,160,000	2,160,000	2,160,000
Total (capacity/ton)	140,000	160,000	180,000	180,000	180,000

Annual nominal and practical capacities

Annual nominal capacity of this unit, based on 300 working days, is 200,000 tons precipitated calcium carbonate in a year. Nominal capacity of this unit is characterized based on capacity of machinery, throat points in production unit, providing raw materials and initial prediction of market attraction (prediction of required demand of market for product).

Practical capacity of this plan, regarding the unpredicted factors of stop working and also repair and maintenance, is considered 180,000tons in a year with 90% efficiency of nominal capacity.

Production method and desired technology

Working steps in this method are:

1. Removing the limestone from mine
2. Crushing the limestone
3. Sifting and grading
4. Calcination in the furnace
5. Cooling down
6. Transferring lime to lime maker milk
7. Separating the particles by sieve
8. Transferring lime milk to improvement tank
9. Mixing remained particles
10. Transferring lime milk to classifier
11. Separating unmixed particles
12. Transferring lime milk to hydro silicones in order to more separation
13. Injecting required water into lime milk
14. Transferring lime milk to reactors

15. Producing precipitated calcium carbonate
16. Transferring precipitated calcium carbonate to filter and separating water from precipitated calcium carbonate
17. Transferring precipitated calcium carbonate by conveyors to dryer
18. Ultimate water extraction
19. Decreasing the size of particles to the required and desired amount
20. Transferring precipitated calcium carbonate to silo and storing in silo
21. Transferring the product to packing system
22. Product distribution

The plan investment costs

The fixed plan investment costs is estimated to be 2,397,978,57 million Rials and the working capital is estimated to be 69,250,83 million Rials.

The plan investment costs

Description	Required				Total (million rials)
	currency (dollar)	rial equivalent	rial (m.r)	required total(m.r)	
Land	0	0	63.000	63.000	63.000
Landscaping	0	0	40,963	40,963	40,963
Building	0	0	12,860	12,860	12,860
Machinery and equipment	23,963,958	2,084,864	0	2,084,864	2,084,864
Installations	0	0	31,354	31,354	31,354
Laboratory equipment and supplies	142,549	12,402	0	12,402	12,402
Vehicles	0	0	12,825	12,825	12,825
Workshop equipment	0	0	91	91	91
Service and administrative equipment	0	0	908	908	908
Unexpected and miscellaneous	1,205,325	104,863	8,100	112,963	112,963
Total fixed assets	25,311,832,60	2,202,129,44	170,100,56	2,372,230	2,372,230
Pre-exploitation costs	0	0	25,748,58	25,748,58	25,748,58
Total fixed investment costs	25,311,832,60	2,202,129,44	195,849,14	2,397,978,57	2,397,978,57
Working capital	0	0	69,250,83	69,250,83	69,250,83
Other assets	0	0	0	0	0
Total plan investment costs	0	2,202,129,44	265,099,96	2,467,229,40	2,467,229,40

The plan production costs

The annual production costs are estimated to be 1347660,16 million Rials.

Production costs

No	Description	Cost (million rials)	cost in practical capacity (million rials)
1	Raw, auxiliary and packing materials	848,971	764,074
2	Production salary and wage	16,416	15,924
3	Water, electricity, fuel and communication	75,574	69,528
4	Insurance	4,570	4,570
5	Repair and maintenance	91,511	84,191
6	Marketing and ads	48,000	44,160
7	Production unpredicted and miscellaneous	51,852	47,704
8	Depreciation	210,765	210,765
Total		1347660,16	1240915,55

Economic indices

Economic indices

Description	Value-measurement scale
NPV (net present value)	1420232,26 million rials
IRR(internal rate of return)	31,96%
PBP (period of return of capital)	3years

Ministry of Economic Affairs and Finance
Organization for Investment Economic and Technical Assistance of Iran
(OIETAI)
Foreign Investment Center of Lorestan Province
Tel (Tehran): (021) 33967749-33967766-33967762-39902485-39902488-39902486
Tel (Khoramabad): (066) 33229577
Fax: 33967774
Website: www.investiniran.ir
eco_isc@yahoo.com