

## **Plan: printing ink production**

### **Introduction to product:**

The main goal of this plan is to establish printing ink production unit in Lorestan Province. The ISIC code of the product is 2422312387 from chemicals manufacturing group (24) and colors, polish oil and similar coatings, printing ink and putty types subgroup (2422). Different types of the printing inks are imported and exported under chapters of tariff 3215 of Iran custom regulations and sub-tariffs 322151100 entitled as black color printing, even concentrated or solid and 32151900 entitled as printing ink except black, even concentrated or solid. The main conditions on their importing is to take the permission from the department of commerce and ministry of industries and mines, paying 5% of the importing fees in 2016 (custom fee is 4% and commercial profit is 1%).

### **Introducing the product's application:**

Today, the raw materials used for printing ink are increasingly developing that there have been advances machineries and procedures produced and supplied and printing industry changed from paper printing to metal, polyethylene, textile, melamine and ceramic prints. Contemporary inks can recreate a large spectrum of the particular manifestations in printing process with their numerous characteristics and capabilities such as quick transfer to the printing surface, scratch and erosion strength, stability and suitable color cover and environmental standards.

### **Different types of the particular inks and their applications:**

1. Paper printing colored ink
2. Pigmented inks for paper
3. Ink for polyethylene films
4. Alcohol-reducible polyamide ink
5. Co-solvent polyamide ink
6. Ink for cellulose films and other acrylic or PVC films

### **Plan suggested sites**

Based on the advantages of the establishment in industrial parks and zones, the Lorestan province industrial parks are suggested for implementing the plan.

### **Raw, auxiliary materials and consumables**

Printing inks are consisted of varnish-pigment including resins, oils, jelly-making materials and additives which are investigated in form of the ink raw materials. All raw materials of this unit are supplied locally and by importing and are available for the printing ink production unit and the raw material supply is not the production line bottleneck.

#	Raw, auxiliary materials and packing	Measurement Unit	Amount/year	Unit Price	Annual Cost mRial
1	Solvent	1000kg	306	50,000,0	15,300

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2	Resin	1000kg	102	180,000,000	18,360
3	Pigments	1000kg	77	150,000,000	11,475
4	additives	1000kg	26	200,000,000	5,100
5	gallon	n	25,500	38,000	969
<b>Total</b>					<b>51,204</b>

### Sales plan and target market

The products price as the factory price for sale is as follow. Based on the lack of sufficient supply and demand level, the target market will be local industries.

#	Description	practical capacity (t)	nominal capacity (t)	unit price(rial)	Annual Sale(mRial)
1	printing ink	500	450	180,000,000	90,000
<b>Total</b>		<b>500</b>	<b>450</b>		<b>90,000</b>

### Annual nominal and practical capacity

Product's annual manufacturing capacity in 3 working shifts, each with 8 working hours daily and 300 days per year is approximately 500 tones. Considering unpredicted and unexpected factors of process stop as well as maintaining and repairing processes, the plan practical capacity for this unit is 90% of the nominal one equivalent to 450 tones.

### Manufacturing procedure and technology

In printing ink production, there is not complex and sophisticated machineries and production process used and the technical knowledge on the ink is related to the manufacturing formula. Raw materials type, amount of each one and adding phases in mixer and their blending are the main set of the technical information. At first, the solvent and pigments are mixed and then the pigment particles are distributed with higher concentration comparative to other ink components. Then, the resulted material is studied for quality. Next, in mixer other components are added to the mixture and the ink is regulated in term of the concentration and color. Therefore, after the laboratory confirmed the quality during viscosity experiments, the color and physical characteristics are inserted to the filter system and finally the printing ink is packed and stored.

### Investment costs

The fixed investment costs include 36.5 billion Rials and the working capital is 6.21 billion Rials.

Description	Total Cost(m.Rial)	%
Land purchase	2,800	7%
Site preparation and development	1,165	3%
Civil works, structures and buildings	15,060	35%
Machinery and equipment	7,577	18%
Branches And Installation	5,614	13%
laboratory equipment	856	2%
Vehicles	400	1%
Service equipment	87.00	0%
official equipment	387	1%
Other and unpredicted costs	1,697	4%
<b>Total FIXED ASSETS</b>	<b>35,642.08</b>	<b>83%</b>
pre-production expenditures	860.32	2%
<b>TOTAL FIXED INVESTMENT COSTS</b>	<b>36,502.39</b>	<b>85%</b>
Working capital in 100% of capacity	6,218.84	15%
Other assets	0	0%
<b>TOTAL INVESTMENT COSTS</b>	<b>42,721.23</b>	<b>100%</b>

#### Production costs:

Annual costs of the manufacturing process include 1300 billion Rials estimated.

#	Description	Total Cost(m.Rial)
1	Raw and packing material	51,204
2	Personnel's salary	7,856
3	Energy	680
4	Building and livestock insurance	64
5	Repair, maintenance and spare parts	1,402
6	Marketing and Advertising	4,500
7	Unpredicted	3,285
8	Depreciation	2,607
<b>Total operational and non-operational production costs</b>		<b>71,597</b>

#### Economic indices

Description	Amount-measurement scale
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Summary of the pre-feasibility studies of printing ink production

<i>NPV</i>	<i>27270 m Rial</i>
<i>IRR</i>	<i>35.02%</i>
<i>PBP</i>	<i>2.44 years</i>

Plan and Budget Organization of Lorestan province

## **PROJECT PROFILE – SUMMARY SHEET**

### ***Project Introduction***

1. Project title: **printing ink production**

2. Sector: **chemicals manufacturing**

Sub sector: **colors, polish oil and similar coatings, printing ink and putty types**

3. Products/Services: **printing ink types**

4. Location: ...    Free zone     Economic special zone     Industrial Estate     Main Land

5. Project description:

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6. Annual capacity: 500 t/year

### ***Project Status***

7. Local / internal raw material access 100 %

8. Sale: 100% locally

- Anticipated export market 0 %

## Project Status

9. Construction Period 24 month

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, foreign currency quota, 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, equipments and know- how concluded? Yes  No

## Financial Structure

11. Financial Table

Description	Local Currency Required			Foreign Currency Required Million Dollar	Total Million Dollar
	Million Rials	Rate	Equivalent in Million Dollar		
Fix Capital	29614.59	31000	0.96	0.222	1.18
Working Capital	6218.84	R for	0.20	0	0.20
Total Investment	35833.43	each Dollar	1.16	0.222	1.38

- Value of foreign equipment/machinery 0.222 million dollar
- Value of local equipment/machinery 0.022 million dollar
- Value of foreign technical know- how million dollar
- Value of local technical knows- how million dollar
- Net Present Value (NPV): 27270 Million Rial for 10 Year, discount rate: 20%
- Internal Rate of Return (IRR) 35.02%
- Payback Period (PP) 40.98%

## General Information

12. Project Type : Establishment  Expansion and completion

13. Company Profile:

-Name (legal /natural persons):

-Company Name:

-Address:

-Tel:

Fax:

Web site:

-E-mail:

-Local entrepreneur : 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)

**Ministry of Economic Affairs and Finance**  
**Organization for Investment Economic and Technical Assistance of Iran (OIETAI)**  
**Foreign Investment Center of Lorestan Province**  
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