

## **WATER PROOFING SERVICE**

### **1. INTRODUCTION:**

Starting a waterproofing service for residential homes means that you can specialize in one or two particular types of waterproofing, such as concrete foundations or solarium. Or, the service can focus on waterproofing solutions in general for residential homes. Waterproofing services can be promoted and marketed to both residential home owners and property management companies by employing traditional advertising and marketing mediums and methods. The service can also be offered to renovation and construction companies on a subcontract basis. The key to success in this type of repair business is to have a good working knowledge of construction practices and the ability to properly assess water ingress problems. As this type of repair business is highly specialized, true professionals will have no problem in creating a business income that can easily surpass Rs. 15.00 lakhs per year. A great additional revenue source for the service is to also become an exclusive agent representing manufacturers' waterproofing products. Many of these types of specialized waterproofing products can be used in your business, as well as sold to architects, contractors, and the general public.

WATERPROOFING CENTRE IS services providers, engaged in offering waterproofing services for concrete structures and buildings. Waterproofing is a technique to prevent commercial properties, public buildings, high rises buildings from water in order to protect interiors finish of buildings. waterproofing also maintains structural integrity of buildings and provides healthy living environment by preventing the development of Structure. A best water proofing center should have Diligent & Prompt Services. High Quality Results. Effective analysis of Area to be Water Proofed. Efficient Customer Support. Adherence to Clients' Requisites. Superior Services at Low Cost. Written Guarantee/ warranty.

## **2. PRODUCT & ITS APPLICATION:**

Water proofing is done differently for different type of water proofing. Some of the examples are as under.

Leak proofing process, Terrace Chemical proofing process as follows : A) Polymer Acrylic cementitious chemical coating B) Poly acrylic cementitious Sandwich textile membrane chemical coating C) Acrylic waterproof chemical coating D) Tar based waterproof Liquid membrane chemical coating E) Polyurethane waterproof chemical coating F) Rubberized waterproof chemical coating We use all the product with advance technology.

EXTERNAL WALLS WATERPROOFING SERVICE use elastomeric paint, polyurethanes, poly sulfides and polymers of various companies. Surface preparation and applying hydrophobic, breathable sealer treatment that impregnates deep inside the surface due to low surface tension and is resistant to the alkalinity of cement plastered surface. The treatment will bridge the hairline cracks and prevent ingress of moisture and capillary condensation on the surface and increase the life of the paint. It will also prevent the hairline cracks from becoming more visible due to accumulation of dirt and give better bonding to the paint. Impregnation with oligomeric alkyl alkoxy.

DAMP PROOFING SERVICES: There are 2 types of dampness Dry & Wet, use the silicone gel chemical process to treat affected walls after this treat the wall with damp proof chemical coat.

WATER TANK WATER PROOFING SERVICE: includes internal waterproofing for overhead waterproofing tank and external wall waterproofing. In internal waterproofing for tank, cover internal and external structural membranes with a layer of quality cement mortar. This is carried out by a team of professionals, which follows streamline methodology that includes breaking RCC surface, curing and preparatory work such as hacking out loose concrete cover. In external wall waterproofing, we apply one coat of primer and two coat of elastomeric waterproofing coating on the prepared surface as per approved shade and color to avoid leakage of water.

**BUILDING WATERPROOFING SERVICE:** It is intent to make client's life easier by addressing all of their waterproofing needs and ensuring their buildings stay water tight.

**EXPANSION JOINT WATERPROOFING SERVICE:** cleaning the surface from dust; mortar splashes loose materials etc to get a sound concrete surface. Repairing of all cracks and honey combing with epoxy putty or rich cement sand mortar ad mixed with waterproofing admixture. In case of cement mortar repairing sealant treatment should start after 28 days of repairing. Expansion Joint Treatment Clean the joint with wire brush, nylon brush and air if possible. Filling polystyrene based back-up rod in the joint to hold the sealant.

**EXTERNAL WATERPROOFING SERVICES:** have a solution that without breaking of plaster of external walls we can give a waterproofing solution by application of paint. use elastomeric paint, polyurethanes, polysulfides and polymers of various companies for external wall waterproofing. Surface preparation and applying hydrophobic, breathable sealer treatment that impregnates deep inside the surface due to low surface tension and is resistant to the alkalinity of cement plastered surface. The treatment will bridge the hairline cracks and prevent ingress of moisture and capillary condensation on the surface and increase the life of the paint. It will also prevent the hairline cracks from becoming more visible due to accumulation of dirt and give better bonding to the paint. Impregnation with oligomeric alkyl alkoxy.

**SWIMMING POOL WATERPROOFING SERVICE:** provide Swimming Pool Waterproofing to clients in order to prevent pool from any sort of damage.

### **3. DESIRED QUALIFICATIONS FOR PROMOTER:**

Graduate in any graduate.

### **4. INDUSTRY LOOK OUT AND TRENDS**

Waterproofing Chemicals are a class of fine/specialty chemicals which arrest or inhibit permeability of water or moisture to interior or exterior surfaces of wide range of materials e.g. cement/ concrete walls, fabrics, leather articles, paper, electronic goods

etc. It is applied mainly in form of sheet membranes, cementations coating, liquid coating membranes, sprays and coatings etc. The major product types include bitumen, EPDM, TPO, PVC, PTFE and silicone, while the end use applications include Construction, Infrastructure, Automotive, Textile & Leather and others.

The study provides a comprehensive view of the waterproofing chemicals market by dividing it into product, technology, end-user and geography segments. The waterproofing chemicals market has been segmented into bitumen, TPO, EPDM, PVC, Silicone and PTFE based on product. Application segment have been analysed based on historic, present, and future trends.

Regional segmentation includes the current and forecast demand for waterproofing chemicals in North America, Europe, Asia Pacific, Latin America, and Middle East & Africa (MEA). Additionally, the report comprises country-level market sizing in terms of volume and revenue under each respective region. Key countries such as the U.S., Germany, the U.K., Spain, GCC, India, China, South Africa, Mexico, Brazil, etc. have been included in the study. Market segmentation includes demand for individual applications in all the regions and countries.

## **5. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY:**

Increasing cost of construction coupled with rising costs of raw materials and labour have today led to the implementation of advanced waterproofing products and solutions for quality building practices. Though waterproofing as a solution dates back to centuries when habitats were prevented from water through thatch, reed, leaves and then through animal skins, natural stones, pitched roofs but with time and with advent of technology and materials, the options have increased manifold. Concrete as a material has been used since time immemorial due to its cost effectiveness and versatility. The reasons for leakage in concrete to use of excess water, inadequate compaction, long- term drying shrinkage, thermal shrinkage, crack in transition zone, structural stresses and lime leaching. An effective and durable waterproofing system ensures increasing the shelf life of concrete, in turn providing longer durability of a structure and lowering the maintenance costs. Besides, one gets a sound foundation, the property value increases and the property remains aesthetically pleasing. Water damage can lead to metal corrosion, electric hazards, rotting of timber structures and

finishes, swelling of plasterboards, growth of fungus leading to health hazards. Typically, waterproofing should be applied over all below-grade concrete surfaces. These areas would include underground structures, elevated structural slabs over underground surfaces, foundations, terraces and plazas. Internal areas that are waterproofed include bathrooms, shower recesses, laundries, and toilets. From the late 1990s to the 2010s, the construction industry has had technological advances in waterproofing materials, including integral waterproofing systems and more advanced membrane materials. Integral systems such as hycrete work within the matrix of a concrete structure, giving the concrete itself a waterproof quality. There are two main types of integral waterproofing systems: the hydrophilic and the hydrophobic systems. A hydrophilic system typically uses a crystallization technology that replaces the water in the concrete with insoluble crystals. Various brands available in the market claim similar properties, but not all can react with a wide range of cement hydration by-products and thus require caution. Hydrophobic systems use fatty acids to block pores within the concrete, preventing water passage

## **6. RAW MATERIAL REQUIREMENTS:**

Crystalline admixtures : Crystalline-based systems typically come in a dry, powdered form and are hydrophilic in nature. Unlike their hydrophobic counterparts, crystalline systems actually use available water to grow crystals inside concrete, effectively closing off pathways for moisture that can damage concrete. They block water from any direction because the concrete itself becomes the water barrier. The crystalline formula contains no VOCs and can be completely recycled when demolition occurs.

Additionally, crystalline admixtures offer installation advantages. Unlike traditional membrane waterproofing, which tends to be labour-intensive and expensive, crystalline admixtures can be shipped in dissolvable, pulpable bags that are thrown into the concrete batch during mixing. This speeds up the construction schedule and decreases labour costs by combining steps with concrete placing. Integral crystalline waterproofing systems should not be used in applications under constant movement. During the crystallization process, crystals align in a three-dimensional array that breaks when subjected to excessive movement. Areas that require flexibility and face recurring movement- such as plaza decks or rooftops – would be better waterproofed another way.

## 7. MANUFACTURING PROCESS:

For the past three decades, a new type of waterproofing has been used around the globe. These integral admixture systems are added at the batching plant or on-site and react chemically within the concrete. Instead of forming a barrier on the positive or negative side of concrete, they turn the concrete itself into a water barrier. Integral concrete waterproofing systems can be densifiers, water repellents or crystalline admixtures. Densifiers react with the calcium hydroxide formed in hydration, creating another by-product that increases concrete density and slows water migration. They are typically not characterized as waterproofing materials or repellents because they have no ability to seal cracks and joints. Concrete under hydrostatic pressure requires additional waterproofing methods to protect it from damage and deterioration. Water repellents are also known as 'hydrophobic'. These products typically come in liquid form and include oils, hydrocarbons, stearates or other long-chain fatty acid derivatives. Although hydrophobic systems may perform satisfactorily for damp-proofing, they are less successful at resisting liquid under hydrostatic pressure. Induced stresses cause cracking in any concrete, which creates pathways for water passage. So the effectiveness of water repellents is highly dependent on the concrete itself.

## 8. MANPOWER REQUIREMENT:

The enterprise requires 6 employees as detailed below:

| Sr. No. | Designation of Employees | Salary Per Person | Monthly Salary ₹ | Number of employees required |        |        |        |        |
|---------|--------------------------|-------------------|------------------|------------------------------|--------|--------|--------|--------|
|         |                          |                   |                  | Year-1                       | Year-2 | Year-3 | Year-4 | Year-5 |
| 1       | Machine Operators        | 12,000            | 12000.00         | 1                            | 1      | 2      | 2      | 2      |
| 2       | Helpers                  | 8,000             | 16000.00         | 2                            | 2      | 3      | 3      | 3      |
| 3       | Production supervisor    | 15,000            | 15000.00         | 1                            | 1      | 1      | 1      | 1      |
| 4       | Accounts/Stores Asst     | 12,500            | 0.00             | 0                            | 0      | 0      | 0      | 0      |
| 5       | Office Boy               | 9,000             | 0.00             | 0                            | 0      | 0      | 0      | 0      |
|         | <b>Total</b>             |                   | 43000.00         | 4                            | 4      | 6      | 6      | 6      |

## 9. IMPLEMENTATION SCHEDULE:

The project can be implemented in 2 months' time as detailed below:

| Sr. No. | Activity  | Time Required<br>(in months) |
|---------|---|------------------------------|
| 1       | Acquisition of premises   | 1.00                         |
| 2       | Construction (if applicable)  | 1.00                         |
| 3       | Procurement & installation of Plant & Machinery                       | 1.00                         |
| 4       | Arrangement of Finance  | 2.00                         |
| 5       | Recruitment of required manpower                                      | 1.00                         |
|         | Total time required ( <i>some activities shall run concurrently</i> ) | 2.00                         |

## 10. COST OF PROJECT:

The project shall cost ₹ 11.20 lacs as detailed below:

| Sr. No. | Particulars   | ₹ in Lacs    |
|---------|---|--------------|
| 1       | Land  | 0.00         |
| 2       | Building  | 0.00         |
| 3       | Plant & Machinery   | 7.00         |
| 4       | Furniture, Electrical Installations                         | 0.50         |
| 5       | Other Assets including Preliminary / Pre-operative expenses | 0.70         |
| 6       | Working Capital   | 3.00         |
|         | <b>Total</b>  | <b>11.20</b> |

## 11. MEANS OF FINANCE:

Bank term loans are assumed @ 75 % of fixed assets.

| Sr. No. | Particulars             | ₹ in Lacs    |
|---------|-------------------------|--------------|
| 1       | Promoter's contribution | 2.80         |
| 2       | Bank Finance            | 8.40         |
|         | <b>Total</b>            | <b>11.20</b> |

## 12. WORKING CAPITAL CALCULATION:

The project requires working capital of ₹ 3.00 lacs as detailed below:

| Sr. No. | Particulars  | Gross Amt | Margin % | Margin Amt | Bank Finance |
|---------|--------------|-----------|----------|------------|--------------|
| 1       | Inventories  | 1.50      | 0.25     | 0.38       | 1.13         |
| 2       | Receivables  | 0.75      | 0.25     | 0.19       | 0.56         |
| 3       | Overheads    | 0.75      | 100%     | 0.75       | 0.00         |
| 4       | Creditors    | -         |          | 0.00       | 0.00         |
|         | <b>Total</b> | 3.00      |          | 1.31       | 1.69         |

## 13. LIST OF MACHINERY REQUIRED:

A detail of important machinery is given below: Power Requirement: 5 HP

| Sr. No.   | Particulars                                      | UOM  | Qty | Rate (₹) | Value       |
|-----------|--|------|-----|----------|-------------|
|           |  |      |     |          | (₹ in Lacs) |
|           | <b>Plant &amp; Machinery / equipments</b>        |      |     |          |             |
| <i>a)</i> | <i>Main Machinery</i>                            |      |     |          |             |
| i.        | Pneumatic Epoxy Injection Pump                   | NOS. | 1   | 150000   | 1.50        |
| ii.       | Epoxy Injection Machine                          | Nos  | 2   | 100000   | 2.00        |
| iii.      | Drill Operated Injection Pump                    | Nos  | 4   | 40000    | 1.60        |
| <b>IV</b> | Digital Floor Joint Filler Machine               | Nos  | 5   | 250000   | 2.50        |
| V         | Applicator Valve                                 | Nos  | 5   | 50,000   | 0.00        |
| VI        | Inverter, Charger For Battery Operation, Battery | NOS. | 1   | 21000    | 1.90        |
|           | <i>sub-total Plant &amp; Machinery</i>           |      |     |          | <b>7.00</b> |
|           | <b>Furniture / Electrical installations</b>      |      |     |          |             |
| a)        | Office furniture                                 | LS   | 1   | 100000   | 0.20        |
| b)        | Stores Almirah                                   | LS   | 1   | 350,000  | 0.05        |



| Sr. No. | Particulars                   | UOM   | Qty | Rate (₹) | Value       |
|---------|-------------------------------|-------|-----|----------|-------------|
| c)      | Computer & Printer            | L. S. | 1   | 10000    | 0.25        |
|         | <i>sub total</i>              |       |     |          | <b>0.50</b> |
|         | <b>Other Assets</b>           |       |     |          |             |
| a)      | preliminary and preoperative  |       |     |          | 0.70        |
|         | <i>sub-total Other Assets</i> |       |     |          | 0.70        |
|         | <b>Total</b>                  |       |     |          | <b>8.20</b> |

All the machines and equipment are available from local manufacturers. The entrepreneur needs to ensure proper selection of product mix and proper type of machines and tooling to have modern and flexible designs. It may be worthwhile to look at reconditioned imported machines, dies and tooling. Some of the machinery and dies and tooling suppliers are listed here below:

- Kamdhenu Agro Machinery  
Plot No. 6, Near Power House,  
Wathoda Road, Wathoda  
Nagpur - 440035  
Maharashtra, India
- Future Industries Private Limited  
Shed No. 15, Ambica Estate,  
Corporation Municipal Plot,  
Opposite Sadvichar Hospital,  
Naroda, Ahmedabad - 382330,  
Gujarat, India
- The Global Pharma Equipments  
Star Industrial Estate,  
D-32, Naik Pada,  
Near Hanuman Mandir,  
Opposite Dwarka Industrial Estate,  
Vasai East, Vasai - 401208,  
Maharashtra, India

#### 14. PROFITABILITY CALCULATIONS:

| Sr. No. | Particulars                         | UOM        | Year-1       | Year-2       | Year-3      | Year-4      | Year-5      |
|---------|-------------------------------------|------------|--------------|--------------|-------------|-------------|-------------|
| 1       | Capacity Utilization                | %          | 60%          | 70%          | 80%         | 90%         | 100%        |
| 2       | Sales                               | ₹. In Lacs | 9.00         | 10.50        | 12.00       | 13.50       | 15.00       |
| 3       | Raw Materials & Other direct inputs | ₹. In Lacs | 4.48         | 5.22         | 5.97        | 6.71        | 7.46        |
| 4       | Gross Margin                        | ₹. In Lacs | 4.52         | 5.28         | 6.03        | 6.79        | 7.54        |
| 5       | Overheads except interest           | ₹. In Lacs | 1.84         | 1.96         | 2.19        | 2.25        | 2.30        |
| 6       | Interest                            | ₹. In Lacs | 0.84         | 0.84         | 0.56        | 0.42        | 0.34        |
| 7       | Depreciation                        | ₹. In Lacs | 4.90         | 3.50         | 2.45        | 1.75        | 1.58        |
| 8       | <b>Net Profit before tax</b>        | ₹. In Lacs | <b>-3.06</b> | <b>-1.02</b> | <b>0.84</b> | <b>2.36</b> | <b>3.33</b> |

The basis of profitability calculation:

The growth of selling capacity will be increased 10% per year. (This is assumed by various analysis and study; it can be increased according to the selling strategy.)

Energy Costs are considered at Rs 7 per Kwh and fuel cost is considered at Rs. 65 per litre. The depreciation of plant is taken at 10-12 % and Interest costs are taken at 14 -15 % depending on type of industry.

#### 15. BREAKEVEN ANALYSIS:

The project shall reach cash break-even at % of projected capacity as detailed below:

| Sr. No. | Particulars                   | UOM           | Value  |
|---------|-------------------------------|---------------|--------|
| 1       | Sales at full capacity        | ₹. In Lacs    | 15.00  |
| 2       | Variable costs                | ₹. In Lacs    | 7.46   |
| 3       | Fixed costs incl. interest    | ₹. In Lacs    | 2.64   |
| 4       | BEP = $FC/(SR-VC) \times 100$ | % of capacity | 34.96% |

## **16. STATUTORY / GOVERNMENT APPROVALS**

As per the allocation of business rules under the Constitution, labour is in the concurrent list of subjects. It is dealt with by the MOLE at the Central and Departments of Labour under State Governments in respective States / UTs. The MOLE has enacted workplace safety and health statutes concerning workers in the manufacturing sector, mines, ports and docks and in construction sectors.

Further, other Ministries of the Government of India have also enacted certain statutes relating to safety aspects of substances, equipment, operations etc. Some of the statutes applicable in the manufacturing sector are discussed below:

### **The Static and Mobile Pressure Vessels (Unfired) Rules, 1981**

These (SMPV) Rules are notified under the Explosives Act, 1884. These rules regulate storage, handling and transport of compressed gases. These rules stipulate requirements regarding construction and fitments, periodic testing, location, fire protection, loading and unloading facilities, transfer operations etc. in respect of pressure vessels whose water capacity exceeds one thousand litres. These rules are enforced by the Chief Controller of Explosives under the Ministry of Industry and Commerce, Govt. of India (PESO).

### **The Manufacture, Storage and Import of Hazardous Chemicals Rules (MSIHC), 1989**

These MSIHC Rules are notified under the Environment (Protection) Act, 1986. These rules are aimed at regulating and handling of certain specified hazardous chemicals. The rules stipulate requirements regarding notification of site, identification of major hazards, taking necessary steps to control major accident, notification of major accident, preparation of safety report and on-site emergency plan; prevention and control of major accident, dissemination of information etc. These rules are notified by the Ministry of Environment and Forests (MOEF) but enforced by the Inspectorates of Factories of respective States / UTs in the manufacturing sector.

## **The Factories Act, 1948 and State Factories Rules**

The Factories Act, 1948 is very comprehensive legislation dealing with the matters of safety, health and welfare of workers in factories. The Act places duties on the occupier to ensure safety, health and welfare of workers at work. Some of the salient provisions of the Act include:

- Guarding of machinery
- Hoists and Lifts; Lifting Machines and Appliances
- Revolving Machinery
- Pressure Plant
- Excessive Weight
- Protection of Eyes
- Precautions against dangerous fumes, gases etc.
- Explosive or inflammable dust, gas etc.
- Precautions in case of fire
- Safety of buildings and machinery
- Permissible limits of exposure of chemical and toxic substances
- Entrepreneur may contact State Pollution Control Board where ever it is applicable.

### **17. BACKWARD AND FORWARD INTEGRATIONS**

Chemical companies often become integrated and undergo other activities outside the chemical industry. Increased competition prompts many companies to reduce supply chain costs by looking outside the chemical sector at suppliers and customers. While most companies within the chemicals sector primarily produce chemicals, some companies also conduct other manufacturing activities. The exact proportion of chemicals sector companies that are integrated with other sector activities is unknown, but many companies actively seek vertical integration. Many manufacturers pursue vertical integration to secure suppliers and customers for their products.

Mergers and acquisitions are a common way for companies to undertake new chemical ventures. By purchasing their chemical suppliers, some manufacturers secure future chemical feedstock for their products or other chemicals that they use in

manufacturing. The company making the purchase obtains valuable expertise and equipment. Some mining and petrochemical production is more cost-effective when integrated within a chemical company.

Energy and feedstock costs are often a significant expense for chemical companies. Integrating chemical production with activities that secure supplies of chemical feedstock and energy is relatively common as chemical companies grow. Chemical companies are located near mines, oil fields, ammonia factories and water supplies. This reduces transportation costs and increases the reliability of supplies by reducing the distance between feedstock and the factory.

Some companies, such as Sino-Coking Coal and Coke Chemical Industries Incorporated, own their mines. BHP Billiton operates a broad range of mines and is primarily a mining company. It does, however, also produce petrochemical feedstock for the chemical industry and therefore operates within the chemical industry as well. These companies technically operate within both the chemical and mining industries in their normal business operations.

Integrating a chemical company with other activities provides several direct benefits for the company and is becoming increasingly common. High energy costs necessitate greater control of energy resources and minimal reliance on expensive transportation. Chemical companies experience volatile profitability due to fluctuations in feedstock and energy expenses. Some companies control this volatility through careful supply chain management and by charging supply surcharges. Actively researching and developing alternative feedstock and energy supplies helps the company reduce costs.

Vertical integration supports these activities by eliminating redundant activities at multiple companies and increasing efficiency. By consolidating activity among multiple, similar operations, chemical companies achieve cost savings that contribute to higher profitability. End products are often very profitable, and some chemical companies purchase their former customers to take advantage of the marked-up prices of products further along in the supply chain.

Integration may become more common for many chemical companies as competition strengthens and traditional feedstock becomes more expensive. Market demand for

chemical feedstock increases as emerging market economies grow and result in increased consumer spending around the world.

## **18. TRAINING CENTERS AND COURSES**

There is no such training required to start this business but, basic chemical bachelor's degree is plus point for enterpriser. Promoter may train their employees in such specialized institutions to grow up the business. There are few specialised Institutes provide degree certification in chemical Technology, few most famous and authenticate Institutions are as follows:

1. Department of chemical LD college of engineering  
No.120, Circular Road, University Area, Navrangpura,  
Opposite Gujarat University, Ahmedabad, Gujarat 380015
2. MIT College of chemical Engineering, Pune  
Gate.No.140, Raj Baugh Educational Complex,  
Pune Solapur Highway,  
Loni Kalbhor, Pune – 412201  
Maharashtra, India

Udyamimitra portal ( link : [www.udyamimitra.in](http://www.udyamimitra.in) ) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

### **Disclaimer:**

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or

incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.