



PRODUCTS AND MATERIAL SURVEY ON WATERPROOFING PRODUCTS

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Abstract: The survey analyzed different types of products, such as Liquid coatings, membranes, and cementitious products, along with their features and benefits. The report also discusses the most commonly used materials, such as polyurethane, acrylics, and bitumen. The survey results highlight the importance of selecting the right waterproofing product or material for a particular application. The report provides insights into the key factors that should be considered when choosing a waterproofing product, such as the substrate, environmental conditions, and durability requirements. Overall, the survey findings suggest that there is a wide range of waterproofing products and materials available in the market, each with its unique features and benefits. The report concludes by providing recommendations for selecting the most appropriate product or material for a particular waterproofing application. This report is detailed overview of different kind of waterproofing products available in market by DR.FIXIT (PIDILITE). The survey is help to understand how to use different kind of admixture for changing concrete characteristics Or different kind of waterproofing guidance. Overall, this report provides a comprehensive overview of the wide array of waterproofing products available today, offering insights into their materials, applications, and performance characteristics. It serves as a valuable resource for industry professionals and decision-makers, facilitating informed choices when selecting waterproofing solutions to protect structures and materials from the adverse effects of water infiltration.

Key words:- liquid coatings, Experience, Waterproofing, chemical, Products, Materials, Survey

I. INTRODUCTION OF COMPANY

Since its inception in 1959, Pidilite Industries Limited has been a pioneer in consumer and specialties chemicals in India. Pidilite is a consumer centric company committed to quality and innovation. For decades, we have been pioneering products for small to large applications, at home and industry, which have forged strong bonds with people from all walks of life. From adhesives, sealants, waterproofing solutions and construction chemicals to arts & crafts, industrial resins, polymers and more, our product portfolio is as diverse as it is ever-evolving. Today, our brands are trusted household and industrial names, and we are the market leader in adhesives. A robust and growing network makes our products accessible across demographics and geographies. Also embrace our responsibility towards the community through social initiatives in rural development, education and healthcare.

The Founder who founded more than a company, Shri Balvantray Kalyanji Parekh has created a legacy of knowledge and virtue. It is difficult to capture the essence of a man in a few words, especially if he is Shri Balvantray Kalyanji Parekh, Founder Chairman of Pidilite Industries. Fondly known to all as 'BKP' and 'Balubhai', he was a warm, loving and caring leader who inspired the lives of all those he touched. To the people who knew BKP closely, he was an exceptional human being with a multifaceted persona. He reached out to all who came in touch with him and left an indelible print on them. He has been described variously as a man with a "humane scientific temperament" and a man who was intent on "creating a legacy of knowledge and virtue".

1.1 MILESTONE ARCHIEVED BY COMPANY

- 1.1.1 1959-THE BIRTH OF FEVICOL
- 1.1.2 1963-COMMISSIONING OF MANUFACTURING PLANT
- 1.1.3 1990-EASTABLISHING BRAND PIDILITE
- 1.1.4 1993-PIDILITE GOES PUBLIC
- 1.1.5 1997-FEVICOL MAKES IT TO THE TOP 15
- 1.1.6 2000- M-SEAL IS ACQUIRED. A NEW DIVISION IS SET UP
- 1.1.7 2001-DR. FIXIT – THE WATERPROOFING EXPERT
- 1.1.8 2002-TRULY A WINNER – FEVICOL WINS AT CANNES
- 1.1.9 2004-HITS THE RS.1000 CRORES TURNOVER MARK
- 1.1.10 2006-EXPANDING THE GLOBAL FOOTPRINT

1.2 POPULAR SUB-BRANDS OF PIDILITE

- 1.2.1 FEVICOL
- 1.2.2 FEVICOL MR
- 1.2.3 DR.FIXIT
- 1.2.4 FEVIKWIK
- 1.2.5 M-SEAL
- 1.2.6 FEVISTIK
- 1.2.7 HOBBY IDEAS
- 1.2.8 MOTO MAX
- 1.2.9 ROFF
- 1.2.10 RANGEELA
- 1.2.11 WD-40

2 INTRODUCTION OF WATERPROOFING EXPERT COMPANY

Dr.Fixit offers comprehensive system solutions for Waterproofing a new home or Repairing an existing one. The product range includes wide variety of new construction and repair waterproofing solutions for all critical surface areas like Roof, External Walls, Structure, Foundation, Internal Walls, Bathrooms and Water Bodies. This expert line of solutions, supported by wide retail availability, on-ground technical team and easy-to-reach brand helpline, aims to deliver on the brand vision of Creating a Leak-free and Damp-free India!

Dr. Fixit products are created at modern R&D centers in India, Middle East and Singapore, which employ advanced manufacturing facilities and highly trained professionals. The brand offers specialized training and services facilities to professionals apart from offering Modern Waterproofing solutions to consumers.

Dr. Fixit offers a wide range of innovative construction chemicals in waterproofing, building repairs, tile fixing, sealants, coatings and paints, grouts and anchors and industrial floorings. The products are easily available in cement, building materials, paints and hardware stores.

2.1 DR. FIXIT TOP VARIANTS



DR.FIXIT LW+



DR.FIXIT URP



DR.FIXIT RAINCOAT

FIGURE 2.1 DR. FIXIT TOP VARIANTS

DR. FIXIT was Popular in water proofing industries by this Products, and also this 3 Products can give major market-marketing of company. By year and year this product can give more selling or revenue to company

2.2 CONSTRUCTION CHEMICALS DIVISON

Pidilite is the country's leading player for construction chemicals with the Dr. Fixit brand. Under Dr. Fixit, we offer a range of waterproofing and repair solutions. Besides a large and comprehensive product range, Pidilite has also trained and associated with a large pool of applicators to offer the right advice and solutions to its customers.

Pidilite Industries Ltd. has promoted Dr. Fixit Institute of Structural Protection and Rehabilitation (DFI-SPR), a standalone not-for-profit organisation with a vision to become a premier national knowledge and skill development centre in waterproofing and other areas of renewal engineering. The endeavour is to enhance the service life of Built Environment through global sharing knowledge and best practices in the field of Waterproofing, Structural Protection, Repair and Rehabilitation. It has also set up an Advance Diagnostic Lab and library for industry professionals on its campus.

3 TECHNICAL DATA OF DR. FIXIT PRODUCTS

3.1 INTEGRAL WATERPROOFING



FIGURE 3.1 INTEGRAL WATERPROOFING

Dr. Fixit Pidiproof LW+ is specially formulated integral liquid waterproofing compound composed of surface active plasticizing agents, polymers & additives. It is used as an additive for cement concrete, mortar & plasters. It makes concrete cohesive and prevents segregation.

Table 3.1 Technical Information of Dr. Fixit Lw+

PROPERTIE	SPECIFICATION	RESULTS
Appearance		Free flowing liquid
Colour		Wine red
Sp. gr.		@ 250C 1.04 – 1.09
Nonvolatile content		13.5 - 14.5%
pH value		11.0 – 14.0
Setting time, minutes	IS : 2645 : 2003	Passes
Chloride content	IS : 2645 : 2003	Max. 2.00%
Water permeability	IS : 2645 : 2003	Passes
Compressive strength N/mm ²	IS : 2645 : 2003	2003 As per the standard

Source : Dr. Fixit Engineer's book

3.2 DPC WATERPROOFING



FIGURE 3.2 DPC WATERPROOFING

Dr. Fixit Bitufix is an emulsified thixotropic bitumen protective coating. The coating dries to form a black flexible protective film. The finished film forms a tough barrier to vapor transmission.

Table 3.2 Technical Information of Dr. Fixit Bitufix

Dr. Fixit Bitufix Consumption Reckoner	
Property	Result
Film Thickness	500 Microns
Ease of Usage	Open and Apply with a Brush
Elongation	50%
Coverage per kg	10 sq.ft

Source : Dr. Fixit Engineer's book

3.3 NEW ROOF WATERPROOFING



DR. FIXIT URP



DR. FIXIT FASTFLEX

FIGURE 3.3 NEW ROOF WATERPROOFING

Versatile for applications are waterproofing of sunken portions of toilets & bathrooms, chhajjas, balconies & staircases. Good as an additive for economical waterproofing of roofs and terraces with a protective screed over it. Also used repair mortar of concrete and masonry repairs like spalled concrete of floors, columns, beams, slabs, parapets, etc. Recommended is heavy duty waterproofing applications. It is a waterproof liquid applied membrane coating for all wet areas in cementitious, concrete and masonry substrates that are in danger of being damaged by moisture

Table 3.3 Technical Information Of Dr. Fixit URP

Dr. Fixit Pidicrete URP Features Reckoner	
Parameter	
Film Thickness	300 Microns
Waterproofing & Mortar modifier	Resistance to penetration
Ease of Usage	Has to be mixed with cement
Consumption for 1000 sq.ft roof	50 kg
Coverage per kg	20 to 22 sq.ft in 2 coats

Source : Dr. Fixit Engineer's book

Table 3.4 Technical Information of Dr. Fixit Fastflex

Dr. Fixit Fastflex Consumption Reckoner	
Parameter	
Material Property	Two component cementitious coating system for waterproofing of wet areas and any water retaining structures such as swimming pools
Film Thickness	1200 - 1500 microns
Ease of Usage	Add the two components to make a consistent slurry, easily apply slurry with brush, roller or trowel in 2 coats at right angle to each other
Consumption for 1000 sq.ft roof	180 - 200 kg
Coverage per kg	5 - 6 sq.ft. in 2 coats
Intercoat - application time	Intercoat - application time
Elongation	120%
Crack bridging	2 mm
Water Penetration (5 bar)	Pass
Food Grade Certification	CFTRI Certified (Passed)

Source : Dr. Fixit Engineer's book

3.4 ROOF REPAIR WATERPROOFING



FIGURE 3.4 ROOF REPAIR WATERPROOFING

Dr. Fixit Roofseal Top Coat is single component, insulating elastomeric waterproofing for roofs that offer a seal against water and heat. Dr. Fixit Roofseal Top Coat is based on PU Acrylic hybrid emulsion technology reinforced with nano fibres. It combines the benefits of waterproofing as well as heat reduction in a single product.

3.5 BATHROOM AND WET AREAS WATERPROOFING



FIGURE 3.5 BATHROOM AND WET AREAS WATERPROOFING

Table 3.5 Technical Information off Dr, Fixit Pidifin 2k

Dr. Fixit Pidifine 2K Consumption Reckoner	
Parameter	
Film Thickness	1000 Microns
Ease of Usage	2 component
Crack bridging	Up to 2 mm
Coverage per kg	6-7 sq.ft in 2 coats

Source : Dr. Fixit Engineer's book

3.6 EXTERNAL WALL WATERPROOFING



FIGURE 3.6 EXTERNAL WALL WATERPROOFING

Dr. Fixit Primeseal is water-based primer composed of acrylic emulsion polymer, properly selected fine fillers, white pigments & additives in water as a medium. It is used as primer over exterior & interior building walls before application of water based paints

A high performance flexible waterproofing membrane that creates a impermeable waterproof barrier & also bridges small cracks.

Dr. Fixit Raincoat Classic system is composed of high quality acrylic emulsion polymer, light fast & weather durable pigments, properly selected & graded fine fillers, additives & biocides. It is used asa waterproofing & protective coating for exterior walls of the buildings because it forms high film thickness. It has excellent flexibility, breathability, water resistance, crack-bridging, weathering durability and an excellent resistance to the growth of micro organisms

Dr. Fixit Raincoat Select is composed of high quality acrylic emulsion polymer, light fast & weather durable pigments, properly selected & graded fine fillers, additives & biocides. It is used as a waterproofing & protective coating for exterior walls of the buildings because it forms higher film thickness. It has excellent flexibility, breathability, water & dust resistance, crack-bridging, weathering durability and an excellent resistance to the growth of microorganisms.

Table 3.6 Technical Information of Dr. Fixit Primeseal

Dr. Fixit Primeseal Features Reckoner	
Parameter	
Dilution	2 : 1 :: Primeseal: Water
No. of Coats	1
Coverage per litre	Up to 2 mm
Coverage per kg	100.ft (in 1 coat)

Source : Dr. Fixit Engineer's book

Table 3.7 Technical Information of Dr. Fixit WPC

Dr. Fixit Raincoat WPC Consumption Reckoner	
Parameter	
Film Thickness	120 - 130 Microns
Elongation	> 100%
Crack bridging	0.5 mm
DPUR	Medium
Water Absorption	8-10%
Anti-Fungal and Anti Algal Warranty	NA
No. of Coats	1 WPC + Paint of your choic
Coverage	WPC - 42 sq.ft/l

Souce : Dr. Fixit Engineer's book

Table 3.8 Technical Information of Dr. Fixit Classic

Dr. Fixit Raincoat Classic Consumption Reckoner	
Parameter	
Film Thickness	170 - 190 microns
Elongation	Min 100%
Crack bridging	2 mm
DPUR	Very Low
Water Absorption	8-10%
Anti-Fungal and Anti Algal Warranty	7 Years
No. of Coats	1 WPC + 1 Classic
Coverage	WPC - 42 sqft/l + Classic - 75 sq ft/l

Souce : Dr. Fixit Engineer's book

Table 3.9 Technical Information of Dr. Fixit Select

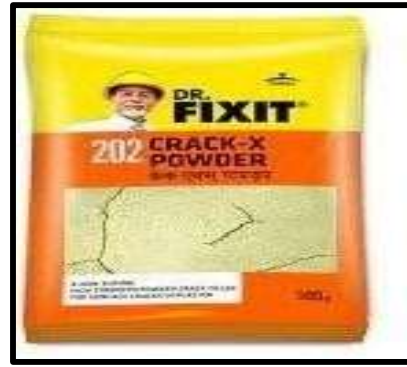
Dr. Fixit Raincoat Select Consumption Reckoner	
Parameter	
Film Thickness	200 - 210 microns
Elongation	110 - 115%
Crack bridging	2 mm
DPUR	Very Low
Water Absorption	8-10%
Anti-Fungal and Anti Algal Warranty	10 Years
No. of Coats	1 WPC + 1 Select
Coverage	WPC - 42 sqft/l + Classic - 75 sq ft/l

Souce : Dr. Fixit Engineer's book

3.7 WALL REPAIRS



DR. FIXIT CRACK-X-PASTE



DR. FIXIT CRACK-X-POWDER

FIGURE 3.7 WALL REPAIRS

Table 3.10 Technical Information of Dr. Fixit Creak-x-Paste

Dr. Fixit Crack-X Paste Feature Reckoner	
Parameter	
Consistency	Paste form without sagging
Durability	Excellent resistance to UV
Ease of application	Easy to apply by putty knife
Crack filling	To be used for Cracks upto 5 mm
Coverage	25 - 30 running metre/Kg

Source : Dr. Fixit Engineer's book

Table 3.11 Technical Information of Dr. Fixit Creak-x-Powder

Dr. Fixit Primeseal Features Reckoner	
Parameter	
Durability	UV and weather resistance
Ease of application	Applied as one time filling (does not require re-application)
Crack filling	To be used for cracks upto 10 mm

Source : Dr. Fixit Engineer's book

4 METHODOLOGY

4.1 DATA GIVEN BY COMPANY OR PP STORE

Dr. Fixit provide me site data for Total water proofing or admixture by PP Store, in this site data mention all details like Owner or Engineers name or contact no. with Full Address or reference name.

Need to visit the site and give information, for which admixture beneficial to use in concrete as per financial condition and need quality of concrete or like for total water proofing then which kind of chemical best for using, to complete water proofing.

For waterproofing need to check which type of surface condition and which type of Quality water proofing need of owner to get Total Water proofing solution

4.2 SITE VISIT FOR WATER PROOFING

After receiving site details need to call the representative and fix the appointment to meet at site location or at meetup location.



FIGURE 4.1 SITE VISIT FOR WATER PROOFING

4.3 SAMPLING OR LIVE PERFORMANCE OF PRODUCTS

After successfully visited site or meeting representative on site, do need to showing live performance of eligible products in front of representative by sampling or demo

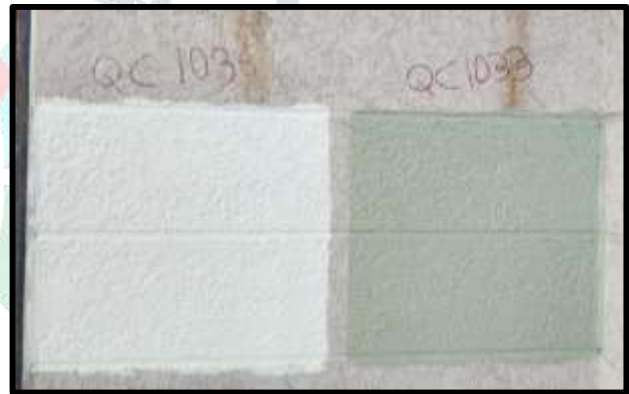
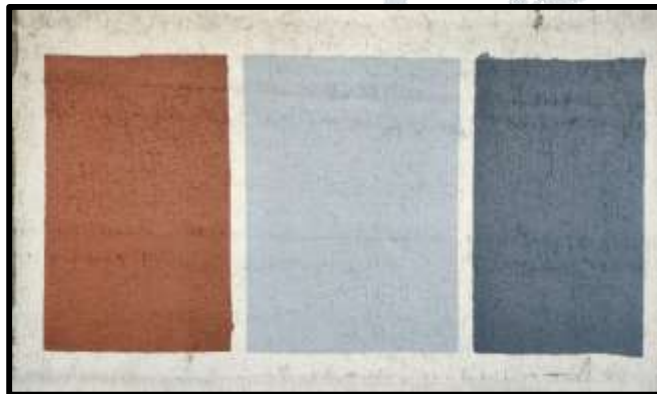


FIGURE 4.2 SAMPLING OF EXTERNAL WALL WATERPROOFING

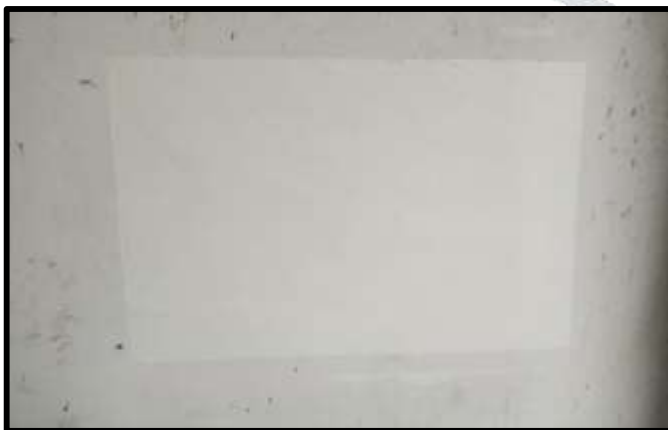


FIGURE 4.3 SAMPLING OF TERRACE WATERPROOFING



FIGURE 4.4 SAMPLING OF ADMIXTURE

4.4 ESTIMATE CALCULATION

After successfully of sampling now representative need Estimate of material ,which can use in particular area or approximate rate estimate to give idea of total costing of material

4.4.1 ESTIMATE FOR EXTERNAL WALL WATER PROOFING

Table 4.4.1 Estimate for External wall waterproofing

Total Sq.ft	3000
Material can use	Raincoat neo
Material coverage in 1lt/sq.ft	40
Need Material for particular sq.ft	$3000/40 = 75$ lit
Quantity of material of 20 lit	3.75
Rate for 20 lit	5500
Total Material costing	20625/-

4.4.2 ESTIMATE FOR ROOF WATERPROOFING

Table 4.4.2 Estimate for roof waterproofing

Total Sq.ft	3000
Material can use	Roofseal classic
Material coverage in 1lt/sq.ft	12
Need Material for particular sq.ft	$3000/12 = 250$ lit
Quantity of material of 20 lit	12.5
Rate for 20 lit	5800/-
Total Material costing	72500/-

4.4.3 ESTIMATE FOR ADMIXTURE

Table 4.4.3 Estimate for admixture

Required material for concrete	Lw+
Required Total material for 500 cement bag (50kg)	100 lit
Required to use	200ml per bag

5 WATERPROOFING BY SUPERVISION

5.1 Site of admixture

Site given by PP store for admixture , At construction site Using dr. fixit LW+ in concrete to get good Quality of concrete characteristics



FIGURE 5.1 SITE OF ADMIXTURE

5.2 Site of external wall waterproofing



FIGURE 5.2 SITE OF EXTERNAL WALL WATERPROOFING

5.3 Site of terrace waterproofing

- For terrace waterproofing need to do first Cleaning of surface and do crack filling and do crack treatment
- CrcaK Filling or Crack Treatment done by Dr. URP for up to 5mm and for bigger crack need to do Dr. fixit Pu Sealent filling in crack
- After Done complete surface treatment need to start applying 1 Coat of Dr. fixit Roofseal as a primer
- After First Coat Done of Roofseal ,need to do 2nd coat of Roofseal in 24 hours of applying 1st coat
- Applying 3rd coat as a 90 degree direction of 1st coat



FIGURE 5.3 SITE OF TERRACE WATERPROOFING

5.4 Site of wath & w.c.

Site for bath/w.c. waterproofing Need to do applying Dr. fixit fastflex of 2coat in mother surface



FIGURE 5.4 SITE OF WATH & W.C.

6 Conclusion

In conclusion, the survey on waterproofing products revealed a diverse range of options with varying levels of effectiveness, durability, and ease of application. It is crucial for consumers to thoroughly evaluate the specific requirements of their project and consider factors such as product quality, long-term performance, and customer support before making a final selection.

In conclusion, the conducted survey on waterproofing products and materials provided valuable insights into the market landscape and consumer preferences. The findings highlighted several key aspects that can guide manufacturers, retailers, and consumers in making informed decisions regarding waterproofing products.

Firstly, the survey showcased the wide range of waterproofing products available in the market, including liquid coatings, membranes, sealants, and cementitious coatings, among others. This variety allows consumers to select products that align with their specific needs and requirements.

Secondly, the effectiveness and durability of waterproofing products were found to vary significantly. Some products demonstrated excellent waterproofing capabilities and long-term performance, while others fell short in terms of effectiveness or durability. This emphasizes the importance of carefully evaluating product specifications, performance data, and customer reviews to ensure the desired level of waterproofing protection.

Ease of application emerged as a crucial factor influencing consumer satisfaction. Products that offered user-friendly application methods, whether through professional assistance or DIY options, were favored by survey participants. Manufacturers should consider providing clear instructions and guidance to ensure successful and hassle-free application.

The compatibility of waterproofing products with various surfaces and materials was also a key consideration. Consumers preferred products that could effectively adhere to different substrates such as concrete, wood, metal, and masonry. Additionally, flexibility to accommodate substrate movement or expansion was highly valued.

Environmental considerations played a significant role in consumer decision-making. The survey revealed a growing demand for eco-friendly and sustainable waterproofing products. Consumers are increasingly seeking non-toxic, low VOC, and environmentally friendly options. Manufacturers that prioritize sustainability and employ recyclable materials are likely to be viewed favorably.

Cost-effectiveness was an essential factor for consumers. While some high-end waterproofing products were perceived as more effective, there was also a demand for affordable options that provided adequate protection against water damage. Products that strike a balance between price and performance are likely to attract a broader customer base.

Overall, the survey findings underscore the importance of thorough research, understanding individual needs, and seeking expert advice when selecting waterproofing products. Manufacturers should strive to address consumer expectations in terms of performance, ease of use, compatibility, sustainability, and cost-effectiveness to enhance customer satisfaction.

By considering the conclusions drawn from this survey, stakeholders in the waterproofing industry can make informed decisions, develop innovative products, and cater to the evolving needs of consumers seeking effective and reliable waterproofing solutions.

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