

Chennai International Airport
Waterproofing by IWL



IWL

TAKING INDIA BY STORM

Chhatrapati Shivaji Terminus, Mumbai
Waterproofing by IWL



Welcome

IWL India Limited was incorporated in 1988, to manufacture revolutionary, modified bitumen based, waterproofing membranes and primers. We pioneered the manufacture and usage of APP and SBS based bituminous membranes in India. Since then, we have diversified into a number of other product lines, including Road Products, Liquid Waterproofing Membranes, Coatings, Adhesives and Construction Chemicals.

We manufacture more than 100 tons of finished product every day, out of multiple manufacturing facilities. We have a dedicated team of 150 highly experienced professionals. With an ISO 9001:2015 certification, our products are approved by all major consultants, clients and contractors including Military Engineering Services, Nuclear Power Corporation of India, National Thermal Power Corporation, Larsen & Toubro, etc. We have the distinction of executing several major waterproofing and anti-corrosion projects such as Delhi Metro underground tunnels, Nuclear Power Complex at Kudankulam, Tamil Nadu, Nuclear Power Complex at Kaiga, etc. Prestigious projects currently under execution include the Ahmedabad and Chennai Metro Projects. IWL markets its products throughout the country with an in-house marketing team, who are located at all major towns and cities of India.

Delhi Metro
Electrical Insulation by IWL

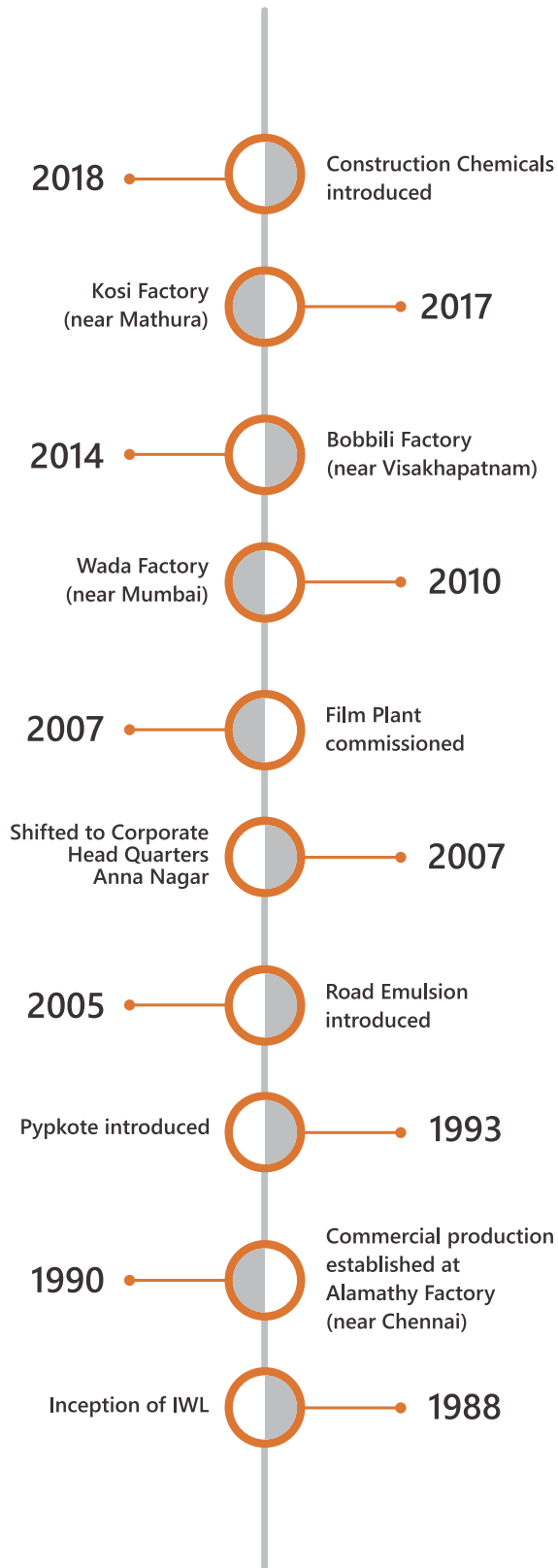


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IWL

Milestones



Overview

IWL operates out of four manufacturing facilities in Alamathy (near Chennai), Kosi (near Mathura), Bobbili (near Visakhapatnam) and Wada (near Mumbai). IWL is head quartered in Chennai and has 150 employees across the country. IWL also works with a large group of subcontractors at various locations and project sites.

Application Services

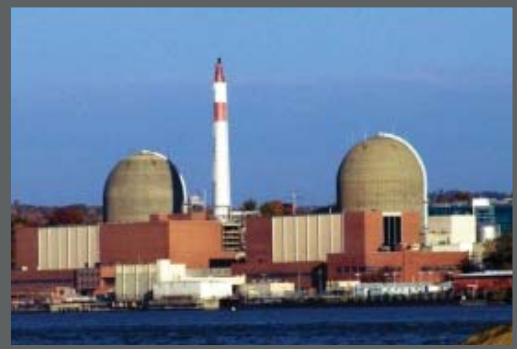
IWL has an in-house Application Department that undertakes application of IWL's products in select and prestigious projects. Our Application Department also provides customer support across the country. Some of the most prestigious and important projects have been undertaken by this Department, including the waterproofing of Delhi, Chennai, Bangalore and Kochi Metros.

Quality and R&D

IWL is an ISO 9001:2015 certified company. IWL first obtained the certification in 1994 and was in fact the first Indian company to be ISO certified for the manufacture of Modified Bitumen membranes.

Quality is part of the very fabric of IWL. Raw Materials undergo rigorous testing at IWL's lab, before they are accepted into the production process. Finished products are tested at multiple stages, to ensure compliance with specifications. Qualified chemists, supported by well equipped laboratories at all plants, constantly monitor quality.

IWL's R&D Labs are fully equipped to cater to even the most demanding applications and solve ticklish problems. From membranes that can withstand cold temperatures lower than -40 Deg C and emulsions with superior penetration characteristics, IWL has supplied custom made products for critical applications. The R&D Team is at the disposal of our valued customers for any out-of-the-ordinary requirements. All test results and manufacturing parameters are captured and stored in IWL's MIS software, ensuring complete traceability and instant retrieval of data. It does not end there! Customer feedback is constantly solicited and utilized to continuously improve product quality.



Kalpakkam Nuclear Power Plant, Kalpakkam
Road Marking by IWL



Chowmahala Palace, Hyderabad
Waterproofing by IWL



JW Marriot, Chandigarh
Waterproofing by IWL



Chennai Central Railway Station
Road Marking by IWL

IWL FACILITIES

Alamathy Factory

(near Chennai)

The manufacture of Polymeric waterproofing membranes and anti corrosive tapes requires complete facilities for handling and processing of bitumen. IWL in collaboration with European experts, set up a completely automated, digitally controlled and monitored facility at Alamathy (near Chennai), it's first factory, for the above purposes. It was built in 1988 and commissioned in 1990. It is spread over 250,000 square feet of industrial land. It is in close proximity to sources of raw materials especially the oil refinery at Manali (Tamil Nadu) which is the major supplier of bitumen. It is also near the Chennai Port to facilitate imports and exports.



Wada Factory

(near Mumbai)

Commissioned in 2010, the Wada factory, near Mumbai, is established in 100,000 square feet of Industrial Land. IWL has put its rich experience, gained over the years, in bitumen handling and processing, while constructing the plant. The outcome is a modern, compact facility with high output and significant finished product storage capacity to instantly cater to customer requirements. Sales from IWL's Wada plant now constitute a significant proportion of IWL's turnover.





Bobbili Factory

(near Visakhapatnam)

IWL's third manufacturing unit was commissioned at Bobbili, Andhra Pradesh in 2014. It is IWL's largest emulsion manufacturing facility and has the capacity to manufacture more than 150 MT of Emulsion per day. The Bobbili plant is now catering to our valued customers in Andhra Pradesh, Orissa and Chhattisgarh. The product has been well received and the quality levels match IWL's usual high standards.



Kosi Factory

(near Mathura)

January 2017 saw the commissioning of IWL's fourth manufacturing facility at Mathura, Uttar Pradesh. It features completely micro-processor controlled machinery, for the manufacture of bituminous emulsion. Storage capacities are significantly higher than IWL's other facilities. With this new plant, IWL now has a manufacturing location within 500 km of almost every location in India. We have brought ourselves closer to our customers, to serve them better.

WATERPROOFING MEMBRANES

Hyperplas Fabric Reinforced Membrane: These fabric reinforced Polymeric waterproofing membranes made of APP modified bitumen are manufactured to the highest international standards. They consist of a centre core of special fabric for extra mechanical strength. The centre core is protected on both sides with Polymeric Asphaltic mix, which has high penetration, high heat resistance and high softening point. With high tensile strength, the membrane is still extremely flexible and pliable to adapt to contours.

Hyperplas HMHDPE Reinforced Membrane: This membrane comes with a center core of High Molecular High Density Polyethylene Film. HMHDPE film is the heart of the membrane and is a complete barrier against moisture and water. Centre core is protected on both sides by asphaltic mix which has properties of high softening point, high heat resistance and high penetration, which in turn is finished on both sides with thermo fusible HMHDPE film. These membranes are available in different weights and thickness, viz. 1.5mm, 2kg, 2mm, 3kg, 3mm, 4mm. These membranes can be used on both flat and sloped roofs.

Hyperself: These are peel and stick membranes. They can be topped with Polyester, PVC and other films and fabrics. The adhesive compound present in the membrane gives great flexibility even at low temperatures. Hyperself membranes have adequate elongation to absorb all structural movements. The membrane is highly resistant to ageing, tearing and perforation. Hyperself membranes are widely used in basement waterproofing.

Plastikfelt: Plastikfelt is a modified bituminous membrane which has a centre core of 20 micron HMHDPE Film. It is used to prevent water penetration inside buildings, on vehicle roof tops and terraces. It can also be used as a vapour barrier. It is low in cost and is easy to apply.



Hyperboard: Hyperboard is a bituminous protection board for waterproofing membranes. It is generally used for protecting membranes in retaining wall applications. It is stuck to the underlying membrane by spot welding method. Hyperboard is made of Polymer Modified Bitumen and reinforced with fiberglass and polyethylene films.

Name	Type of Reinforcement	Thickness (mm)	Top Surface
Hyperplas	Polyester	2, 3, 4 and customised	HMHDPE, Mineral, Aluminium, Sand, Polyester & Customised
Hyperplas	Fibreglass		
Hyperplas	Hybrid		
Hyperplas	HMHDPE		
Hyperplas	7 Layer (double reinforcement)		HMHDPE
Hyperself	Fabric/HMHDPE/none		HMHDPE, Mineral, Aluminium, Sand, Polyester & Customised
Plastikfelt	HMHDPE		HMHDPE, Aluminium
Hyperboard	Fibreglass		HMHDPE



HCL Sholinganallur, Chennai | Waterproofing by IWL

LIQUID WATERPROOFING

Liquithane: Liquithane is a liquid applied polyurethane based waterproof coating conforming to ASTM C836-898 specification. It is based on urethane pre-polymers which cure by reaction with atmospheric moisture to form a continuous film which is rubbery and elastic. It has excellent UV resistance and good adhesion to a wide range of surfaces such as slates, tiles, asbestos, concrete, brick, wood, glass and metal. It does not embrittle with age, exposure to UV radiation or weathering and hence does not crack.

Liquiplas Acrylic: It is an acrylic based liquid waterproof coating. It cures to form a tough UV resistant membrane. Liquiplas Acrylic is an acrylic emulsion, which when mixed with cement, can be used as a waterproof coating for concrete and masonry surfaces. It finds extensive application in waterproofing of bathrooms, balconies etc. It has excellent crack bridging, UV resistance and abrasion resistance properties.

Liquiplas SBS: It is a single component SBS based bituminous liquid coating system. It cures to form a seamless and elastic waterproof membrane with good crack-bridging properties. The resulting film is rubbery and elastic. It has good adhesion to a wide range of substrates.

Liquicrete 151: Liquicrete 151 is an acrylic based polymer, which when blended with cement, forms a modified cementitious waterproof coating. This coating enhances the bonding strength and forms a waterproof and protective layer over the substrate. It is more suited to internal waterproofing applications such as toilets, balconies, etc.

Liquicrete RTU: Liquicrete RTU is a two component acrylic based modified cementitious waterproofing coating system, supplied in pre-packaged, ready-to-use form. It is suitable for concrete and masonry applications and has greater flexibility and elongation characteristics. It is suited to internal and external applications

Liquiplas EMB: It is a single component aliphatic polyurethane modified bitumen based liquid membrane. It is cold applied and cures to form a durable waterproofing membrane. It has high performance characteristics and can be applied over a variety of surfaces. It is especially suited to internal waterproofing applications such as toilets, balconies etc

Liquiplas PUD: Liquiplas PUD is a single component water borne modified polyurethane based waterproofing membrane. It is specially designed to form an excellent elastomeric membrane with high film thickness. Liquiplas PUD is quick-curing has better UV resistance and can therefore be used in external applications.



Rashtrapati Bhavan, Delhi | Waterproofing by IWL

Name	Description	Intended Use
Liquithane	Liquid applied polyurethane based waterproofing coating	It finds extensive application in roof waterproofing applications
Liquiplas Acrylic	Acrylic based liquid waterproofing systems	These can be used as a waterproof coating for concrete and masonry surfaces. They find extensive application in bathrooms, balconies, etc
Liquiplas SBS	Single component bituminous waterproof coating system	It has excellent crack bridging properties and is an economical waterproofing solution.
Liquicrete 151	Acrylic based polymer	Toilet/balcony waterproofing after mixing with cement at site
Liquicrete RTU	Acrylic based two component system	External waterproofing such as roofs and podiums
Liquiplas EMB	Polyurethane and modified bitumen based coating	Internal waterproofing applications
Liquiplas PUD	Water borne polyurethane coating	Suitable for roof, podium and other external waterproofing

PRIMERS, ADHESIVES AND SEALANTS

Liquibit Mastic: It is a bituminous anti corrosive coating. The resultant film is smooth, tough and strongly adherent. It is specially designed for waterproofing the internal surface of storage water tanks, pipes, etc. to prevent corrosion. Liquibit Mastic is odorless and non-toxic. It conforms to IS 9862/1981 & IS 158/1981.

Liquikote: It is a bituminous cold-applied clay type primer. This water based bituminous emulsion (with finely crushed bitumen dispersed in water) is ready for direct application on wet surfaces. Liquikote has slightly lower solid content to provide smoother finish and better flow. It is recommended for waterproofing of leaky walls and surfaces or places where heating of bitumen is not desirable or prohibited. Liquikote gives a coating, which, when cured, is impermeable to water and remains unaffected by attacks of industrial fumes, saline atmosphere, etc. It resists low temperature cracking and also does not crack under the influence of strong sunlight.

Liquifix: It is a high-performance rubber based bituminous adhesive. Liquifix is specially designed for concrete and metal substrates. It is used for fixing insulation boards, extruded/expanded polystyrene & fiber glass tissue on both concrete and metal substrates. It has good heat resistance.

Liquiplas Tar: It is a flexible caulking compound/sealant that has good expansion and contraction characteristics. It can be used for filling cracks or gaps in concrete, brickwork and masonry work. It can be used over tiled roof to fill gaps between tiles and thereby prevent water entry. It has a high softening point and low penetration and thus does not melt or flow on a hot summer day. Yet, in winter, it retains its flexibility and pliability.

Cold Stick Primer: It is a solvent based bituminous primer. It is used for surface preparation for waterproofing and pipe coating applications.

Pypstick: It is a solvent based rubber modified synthetic chlorinated primer. It is cold applied and is used to prepare a surface for pipe coating applications. It has enhanced adherence properties and is quick drying.

Liquiseal PSPG/PSGG: IWL's polysulphide sealant is a universally usable concrete joint, glazing and construction sealant. It is a two component system with a resin and a hardener. Once the two components are mixed, polymerization is initiated and the sealant cures. Polysulphide Sealants have good adhesion properties and are mainly used as fuel resistant sealants. They are available in both Pour Grade and Gun Grade versions.

Name	Description	Intended Use
Liquibit Mastic	A bituminous anti corrosive coating which is tough, odorless and non-toxic	Specially designed for internal surface of storage water tanks, pipes, etc., to prevent corrosion
Liquikote	Bituminous cold-applied clay type emulsion	Recommended for waterproofing of surfaces where heating of bitumen is not desirable or prohibited
Liquifix	High-performance rubber based bituminous adhesive	Used for fixing insulation boards, extruded/expanded polystyrene & fiber glass tissue on both concrete and metal substrates
Liquiplas Tar	Bituminous caulking compound	Used in caulking applications and also as a sealant
Cold Stick Primer	Solvent based bituminous primer	Priming for waterproofing and pipe coating systems
Pypstick	Solvent based rubber modified synthetic chlorinated primer	Priming for pipe coating systems
Liquiseal PSPG/PSGG	Two component polysulphide sealant	Universal sealant with excellent resistant properties

PIPE WRAPPING AND ANTI CORROSION COATINGS

Pypkote: It is a polymeric pre-fabricated tape which is used to prevent corrosion of underground pipes. It is a pre-fabricated sandwich of seven layers of fabric, HMHDPE film and polymeric mix.

Pypkote AW: It is a Coal Tar based corrosion protection tape conforming to AWWA C 203. It consists of a Coal Tar based mix supported on a fabric of high tensile strength fibreglass.

Pypkote AW Primer: It is a solvent based rubber modified synthetic chlorinated primer. It is cold-applied and is used to prepare the surface for pipe coating applications.

Liquipoxy CTE: It is a two component, coal tar modified epoxy paint which protects metal & concrete substrates from corrosion.





Adani Port, Mundra | Pypkote by IWL

Name	Description	Intended Use
Pypkote	Polymeric, pre-fabricated and anti corrosion tape	Used to prevent corrosion in underground pipes
Pypkote AW	Coal Tar based corrosion protection tape	Used to prevent corrosion in underground pipes
Pypkote AW Primer	Solvent based rubber modified synthetic chlorinated primer	Used to prepare the surface for pipe coating applications
Liquipoxy CTE	Two component, Coal Tar based Epoxy paint	Protects metal and concrete substrates from corrosion

ROAD PRODUCTS

Road Emulsions: These are a colloid of two or more immiscible liquids (bitumen and water) where contains a dispersion of bitumen. Three types of bituminous emulsions are available; Rapid setting (RS), Medium setting (MS), and Slow setting (SS). Bitumen emulsions are ideal binders where heating of bitumen or aggregates are difficult. They are easy to transport, store and use.

CRMB (Crumb Rubber Modified Bitumen): It is hydrocarbon binder obtained through physical and chemical interaction of crumb rubber and bitumen. The rubber is used in an asphalt binder which is temperature resistant. CRMB particularly resists brittleness at low temperatures. CRMB has good adhesion to mineral mass, and is suitable for pavements subjected to varying weather conditions. It can be used on highways, traffic junctions and high traffic roads. CRMB is manufactured in three grades.

PMB (Polymer Modified Bitumen): It is a high performance polymer modified bitumen manufactured using quality polymers in a sophisticated reactor at elevated temperatures. Complex processing modifies the properties of bitumen and imparts enhanced fatigue life, better resistance to creep, higher indirect tensile strength, elasticity and other beneficial properties to withstand extreme traffic loads. Use of PMB leads to excellent pavement life, driving comfort and low maintenance.

Liquibit AS (Anti-Stripping Agents): These are chemical compounds which are used to enhance the bond between aggregate and bitumen. They are used to prevent pavement deterioration due to the detachment or 'stripping' of bitumen that coats the surface of the aggregate.

IWL Road Marking Paint: It is a thermoplastic, single component, reflective road marketing paint used for marking on road and runway surfaces. It is available in white and yellow color. It can be applied on cementitious and bituminous surfaces. It has excellent adhesion on well prepared surfaces, good durability and resistance to abrasion.

Mastoplas: It is an APP modified bituminous membrane with high strength reinforcement and heat resistant rubberised asphalt. This membrane is bonded to bridge decks to prolong service life of the bridge by protecting steel reinforcement from corrosion.



Name	Description	Intended Use
Road Emulsions	Colloid of bitumen and water	Used as ideal binders where heating of bitumen is difficult
CRMB (Crumb Rubber Modified Bitumen)	A mixture of bitumen and crumb rubber	Suitable for pavements subjected to varying weather conditions
PMB (Polymer Modified Bitumen)	High performance polymer modified bitumen using quality polymers	Used in making pavement, roads for dense/heavy traffic
Liquibit AS (Anti-Stripping Agent)	These are Amine based compounds	Used to enhance bond between bitumen and aggregate
IWL Road Marking Paint	Thermoplastic single pack reflective paint	Used for marking on road and runway surfaces.
Mastoplas	High strength APP membrane	Used on bridge decks to prevent steel reinforcement from corroding.

CONCRETE ADMIXTURES

Waterproofing Admixtures

LiquiTight IWL+: It is a waterproofing concrete admixture which is used to waterproof various structures. It improves the quality of concrete or mortar and makes it dense and impermeable. It reduces the water required for workability and minimizes segregation and bleeding. LiquiTight IWL+ conforms to IS 2645-2003. It can be used in all structural and non-structural concrete that is constantly or intermittently in contact with water such as sea walls, tunnels, basements, etc.

Normal Plasticisers

LiquiDense (P): range of products are normal plasticizers and water reducing admixtures. They produce high quality concrete by improving durability and water tightness. They also improve cohesion within concrete mixes and reduce w/c ratio by 8-10%.

LiquiDense (R): LiquiDense (R) range of products retard setting time and reduce water content in concrete. They are suitable for long concrete deliveries, hot weather concreting and other applications where high workability retention and retardation are required. They produce high quality concrete by improving durability and water tightness and improve cohesion within concrete mixes.

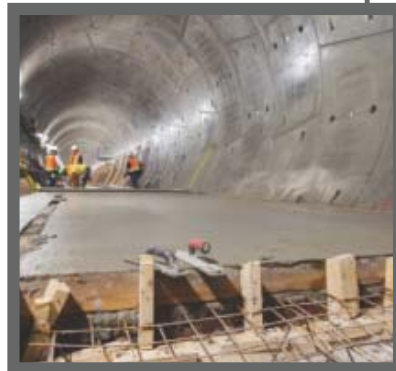
Super Plasticisers

LiquiDense (SP): LiquiDense (SP) range of products are super plasticisers and water reducing admixtures. They achieve low water cement ratio and high strength concrete. They can accelerate early strength development and produce high quality concrete which improves durability and water tightness.

Hyper Plasticisers

LiquiDense (PC): LiquiDense (PC) is a range of high performance concrete admixtures based on polycarboxylic polymers for concrete with low water cement ratio and high early strength. They give high density and impermeable concrete through very high water reduction. They also give high early compressive strengths and increase durability and resistance to aggressive atmospheric conditions through reduced permeability. They can maintain super workability up to 3-4 hours without significant slump reduction.

Name	Description	Intended Use
LiquiTight IWL+	Integral water-proofing liquid	Used to waterproof various structures in different applications
LiquiDense P	Water reducing admixture	Produces high quality concrete by improving durability and water reduction of 8 to 10%
LiquiDense R	Retarding and water reducing admixture	Used for long concrete deliveries, hot weather concreting and other applications where high workability retention and retardation are needed
LiquiDense SP	High range water reducing superplasticiser	Used in low water cement ratio, high strength concrete and pre-cast concrete
LiquiDense PC	High performance concrete admixture based on polycarboxylic polymers for concrete with low water cement ratio	Optimises cement utilisation in high density and impermeable concrete through very high water reduction. Higher early and ultimate compressive strengths. Can maintain super workability up to 3-4 hours and without significant slump reduction
LiquiDense A/AC	Chloride and non-chloride based accelerator	Improves compressive strengths at early stage. Improves frost resistance at early stage
LiquiTight AE	Air entraining admixture	Used in concrete mixes for roadways, airport runways and other concrete exposed to potential frost damage. Increases cohesion of concrete to overcome bleed, segregation





Sri Sathya Sai Super Speciality Hospital, Puttaparthi
Waterproofing by IWL

CLIENTELE

Tuticorin Power Plant
Pypkote by IWL



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