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**Strongest bond of
trust since decades**



**Elephant Shield's[®]
Liquid Rubber[®]**



ONE PRODUCT

LIMITLESS APPLICATIONS OF WATERPROOFING, CORROSION CONTROL & CHEMICAL PROTECTION



WHAT IS ELEPHANT SHIELD'S LIQUID RUBBER®?

Single Compound - Multi Surface Solution

Elephant Shield's - Liquid Rubber® is India's most unique, easiest and durable Waterproofing, Corrosion Control & Chemical Protection system. A breakthrough technology from **CANADA**, allows the freedom to think beyond limitations of architectural design and industrial processes in true sense.

Elephant Shield's - Liquid Rubber® is a Single Compound Multi-use, Multi-Surface, Multi-Area, Multi-Application solution that offers incomparable advantage over all other existing products. This makes it a truly genius protection compound.

Successfully performing for more than a decade in



NOW IN INDIA





UNIQUE PRODUCT WITH UNIQUE CHARACTERISTICS

- Performing all over the world since 2001
- Water-based, Cold-applied
- Odorless, V.O.C Free, Follows all Green Product Regulations
- Stretch ability of over 950% with 95% Recovery
- Highest UV Stable, Will Not Deteriorate with Weather Cycle and Direct Sunlight
- Compatible with 200+ Inorganic Chemicals, Widely used for chemical storage in industries
- 1000 hrs. Salt Fog Corrosion Passed, Can perform under sea water also.
- Abrasion Resistant, Highly Impact Resistant
- High Puncture Resistant and Self-healing If Punctured
- Comfortable With Standing Water
- Single Component Liquid Coating
- Cold Applied by Brush, Squeegee or Spray Equipment
- Curing in Ambient Condition
- Forms Seamless Rubberized Membrane When Cured
- Applied Indoors and Outdoors
- No Special Protective Equipment Required
- Minimum Require Any Kind of Pre or Post Preparation of Surface
- Top coat compatibility with any water based paint or cementitious work



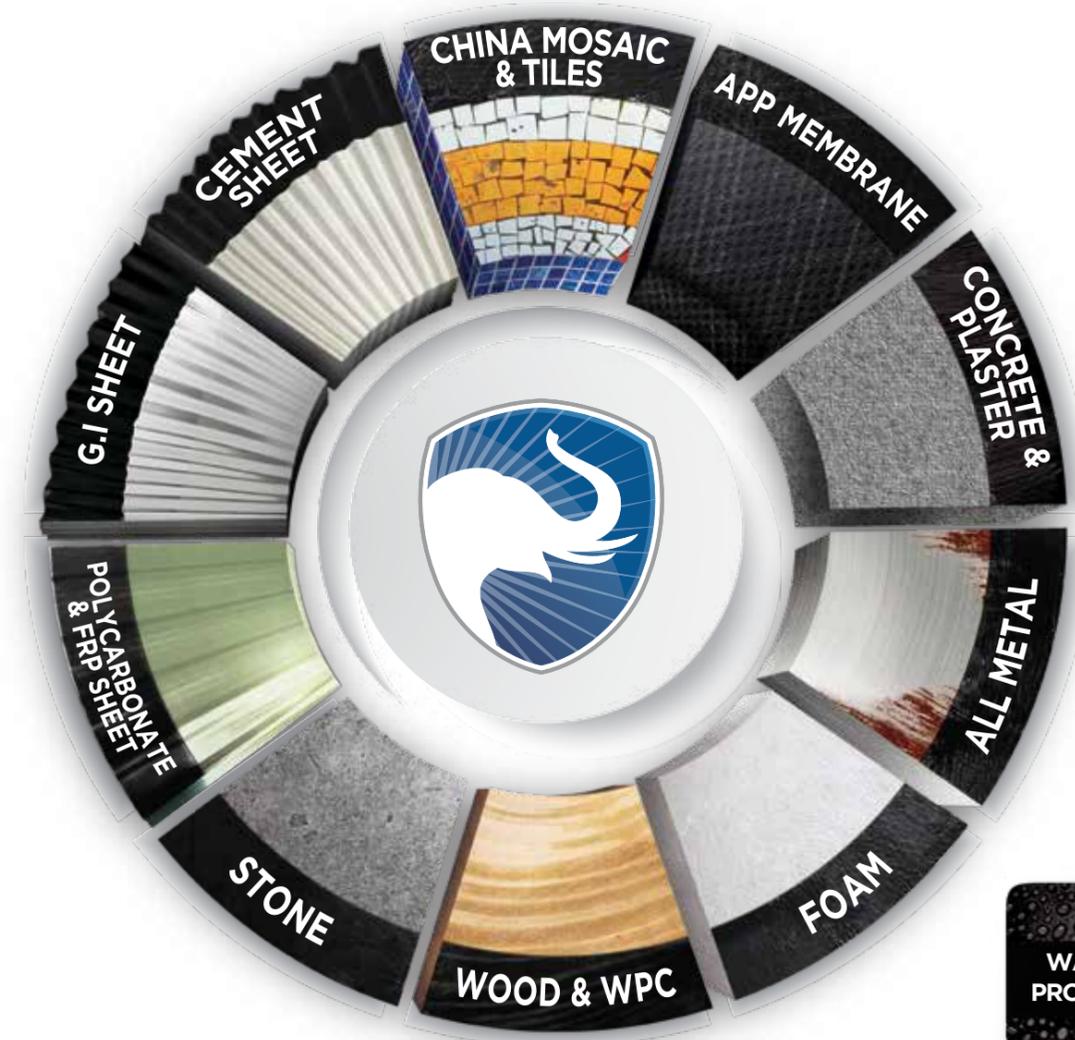
UNIQUE FEATURES

QUALITIES

 Stretch ability Of Over 950% With 95% Recovery	 Save Money & Time	 UV Stable	 Top coat Compatibility with any Water Based Coatings & Cementitious work
 Apply Directly on almost any surface	 Compatible with 200+ Inorganic Chemicals & 1000 hrs. Salt Fog Corrosion Passed	 Multi-application of Waterproofing, Corrosion control and Chemical Protection	
 Non-toxic, Odorless, V.O.C Free	 Eco-friendly, Water Based	 High Impact and Puncture Resistance	 Unaffected by Standing Water
 Unmatched performance in Indian market	 Cold Applied by Brush, Squeegee or Spray Equipment	 No Blending Required	 No fire torch Required



APPLICATION IN 2 EASY STEPS



DIRECT APPLICATION ON ANY SURFACE,

Application on any surface without primer is one of many unique features of "Elephant Shield's - Liquid Rubber" that leverage the end user to think beyond architectural limitations while choosing waterproofing and corrosion protection solution

In addition, Elephant Shield's - Liquid Rubber® is **TOP COAT COMPATIBLE** with any water-based paint to meet aesthetic requirements.

Limitless Applications of Elephant Shield's - Liquid Rubber® for



FIX & CLEAN IT

It is important that the surface is stable and all the roofing sheets are properly fixed. Make sure that the roof/surface is dry, matt (not glossy), free of all dust, dirt, debris, oil, solvents and other impurities before starting the application that may adversely affect Elephant Shield's - Liquid Rubber® adhesion.

Before Application : Be ready with brush/roller, Elephant Shield's - Liquid Rubber® and Reinforcement Fabric or cotton cloth strips gathered at one place, in order to ensure a hassle-free application of Elephant Shield's - Liquid Rubber®

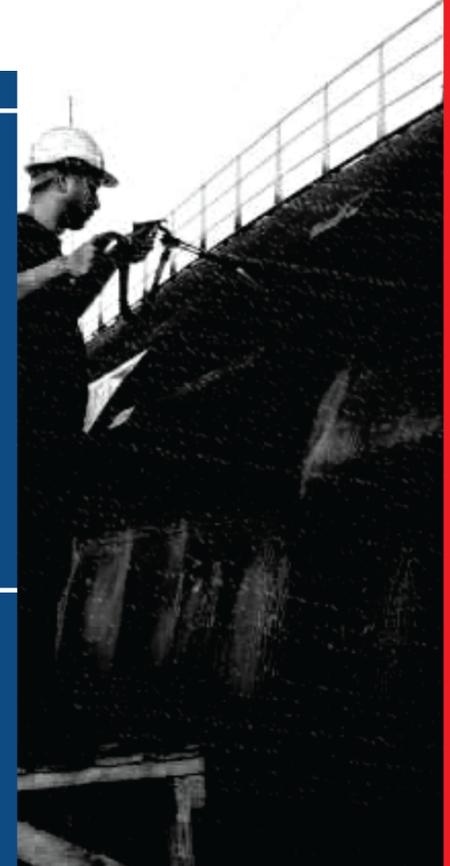


COAT IT

Use the 3 course method with Elephant Shield's - Liquid Rubber®

- Apply the first coat of Elephant Shield's - Liquid Rubber®
- For larger Gaps, Cracks, Joints, Bolt holes, Parapet wall corner, Drainage area or Porous surface apply reinforcement fabric supplied with the buckets immediately after first coat
- Apply Second Coat of Elephant Shield's - Liquid Rubber® above Reinforcement fabrics and Third coat of Elephant Shield's - Liquid Rubber® after 24 hrs
- At last apply two or three coats of Elephant Shield's - Liquid Rubber® on remaining area as per methodology and application if needed

And It's done! Your application area is now Waterproof, Damp Proof and Corrosion Proof. You can apply more layers to extend the life of your application in future.




APPLICATION GUIDANCE
+91 8980 260 260

Specially designed spray system also available for large scale site

1. Waterproofing of Ventilation fan joints with Roof sheets
2. Waterproofing and Corrosion Control of Metal, Asbestos, Cement, G.I., Aluminum, Acrylic & Poly-carbonate sheets
3. Waterproofing of Sky light Joints
4. Waterproofing of Gutter Joints
5. Waterproofing of Utility Cutouts including cables pipeline, duct line etc.
6. Waterproofing, Corrosion Control and Chemical Protection of RCC or Metal Tank and earthen containment systems
7. Corrosion Protection & Air Barrier coating of outside infrastructure
8. Waterproofing of Foundation, Underground Structure and Retaining Walls
9. Below and above ground piping and industrial infrastructure
10. Replacing rubber lining in chemical storage tank
11. Waterproofing of all type of cracks, joints and cutout of wall and roof
12. Waterproofing of bolt-hole joints



INDUSTRIAL

1. Waterproofing of Roof or Terrace (Metal, Wood, RCC, Asbestos/Cement/G.I. Sheet, Stone, etc. Almost any material)
2. Positive side Wall and Terrace damp proofing
3. Waterproofing of Landscaping
4. Waterproofing of Gutter Joints, Slab Joints and Expansion Joints
5. Corrosion protection of outdoor structure
6. Anti - corrosion Treatment of Metal Structure and underground utility overlap
7. Water Proofing of Basement, Bathroom and Water Features during construction
8. Joints between structure and Inter-floor Waterproofing during construction
9. Waterproofing of Foundation, Underground Structure and Retaining Walls
10. Above ground pond waterproofing
11. Balcony waterproofing
12. Waterproofing of Vertical walls and Metal/Polycarbonate sheet joints



RESIDENTIAL

Metal Mechanical Structure PEB Roofing Solution

Waterproofing

- Roof Sheet Joints
- Cutout Joints
- Bolt Joints
- Turbofan Joints
- Rig Joints
- Gutter
- Blower
- End Connections
- Expansion Joints
- Dock
- RCC wall and Metal Sheet Joints

Corrosion | Chemical Protection

- Coastal and wet area
- Beam & Column protection
- Machine Grouting Joints
- Under roof Corrosion & Fumes Protection in chemical processing area
- Underground fire pipes

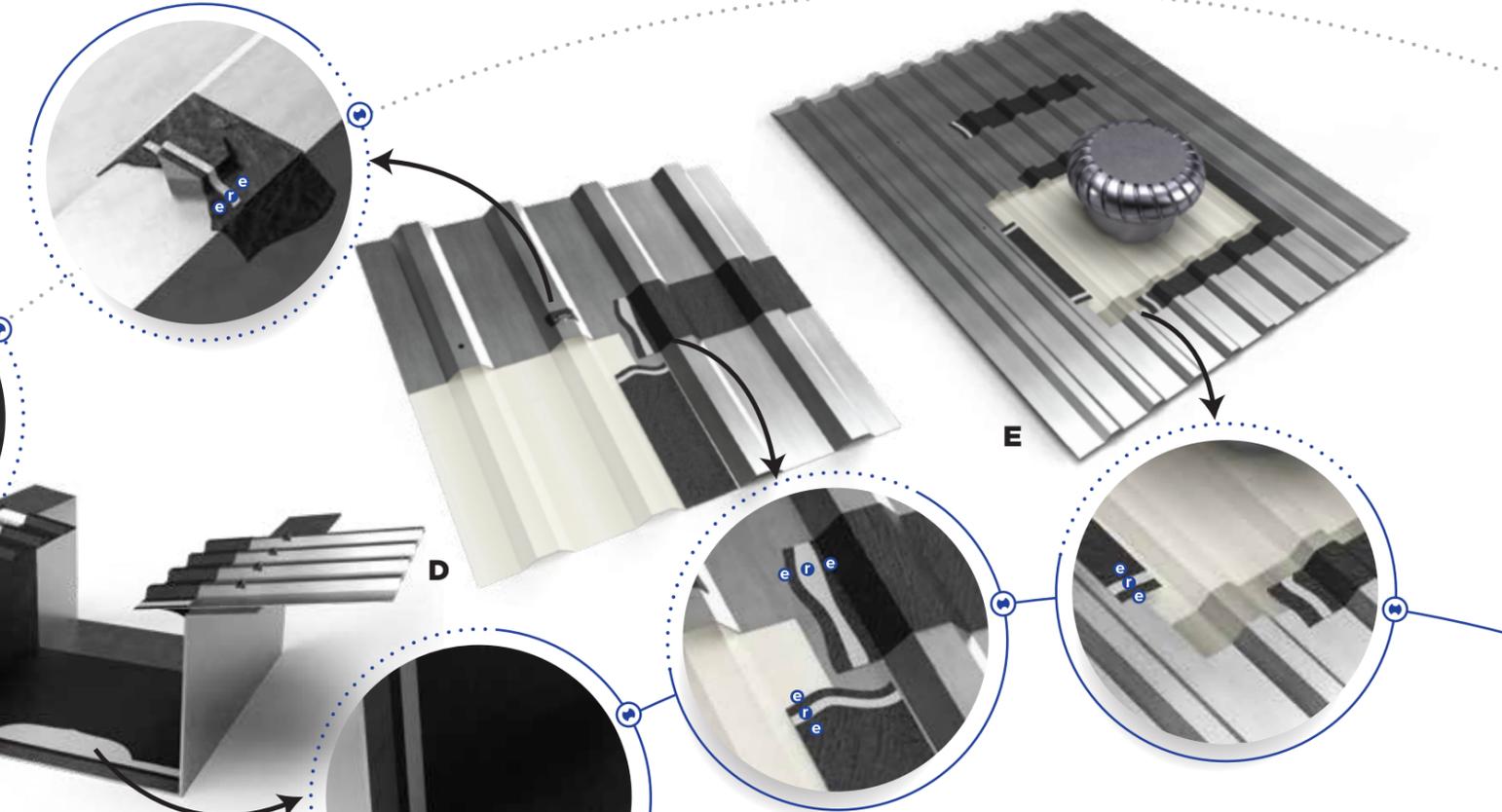
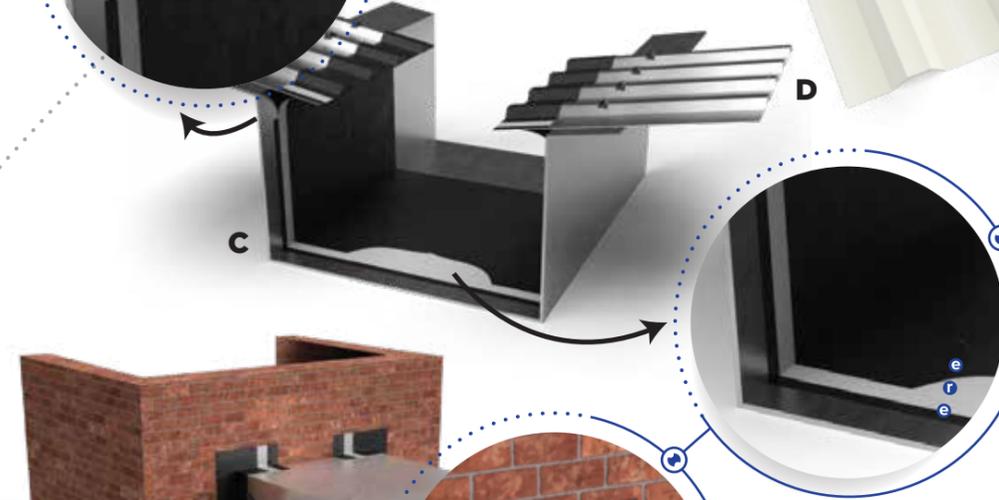
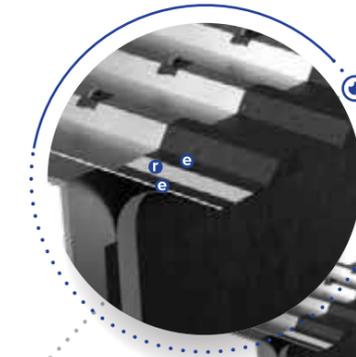
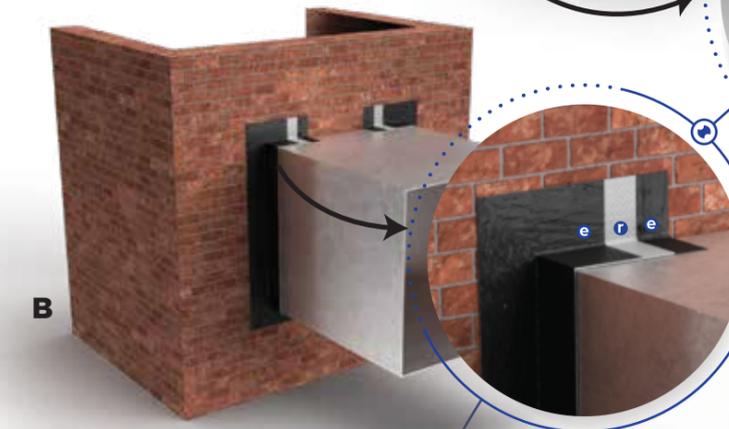
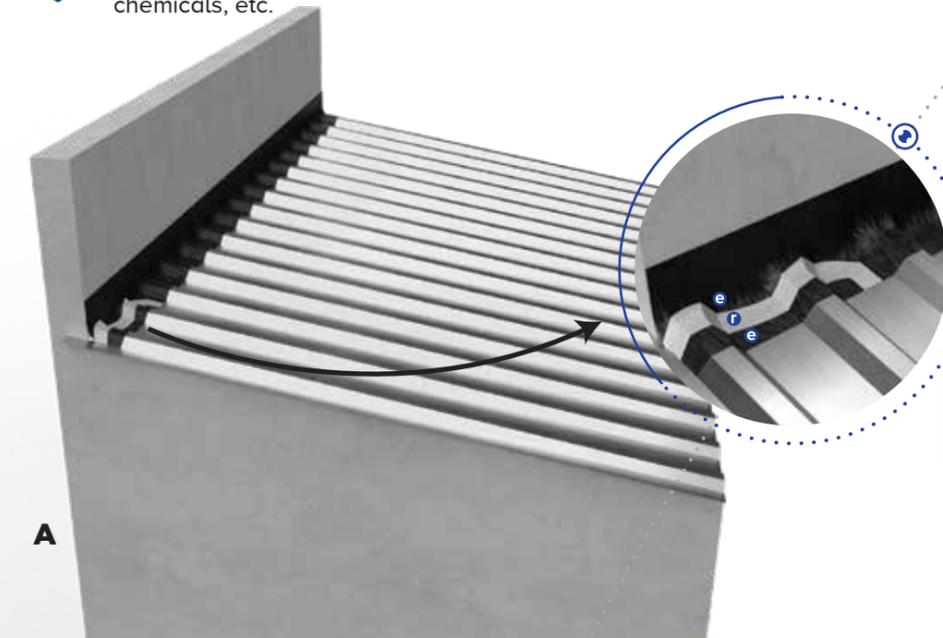
PEB/Metal/Mechanical Structures are primary assets of most industries. It consists with numerous cutouts & joint extensions. Metal infrastructure is widely affected with weather, vibration impact, chemical fumes deposition, heavy rain that cause corrosion and leakage problems. These require unique solution which can protect assets from water leakage and corrosion.

Critical Parameters Impacting Selection of Suitable System for Waterproofing and Corrosion Protection of PEB/Metal/Mechanical Structure:

Adhesion with multiple surfaces: Waterproofing material has adhesion with all the construction material. Like Metal, FRP, RCC, Polycarbonet, G. I., Asbestos, Cement etc.

UV Stabilized & Flexible: UV stability & flexibility that can flex with the structural compaction and expansion without being brittle.

Chemical/Corrosion Resistance: Chemical resistivity that can protect structure from chemical fumes, costal corrosive atmosphere, plant processing chemicals, etc.



- ESLR Coat
- Reinforcement fabric
- Plaster

VARIOUS APPLICATIONS SYSTEM:

- A** VERTICAL WALL JOINT
- B** DUCT
- C** GUTTER JOINT
- D** SHEET JOINT
- E** TURBO FAN

Civil Structure Leakage & Protective Coating Solutions

Waterproofing

- Slab Joints
- Utility Cutouts/ Core Cuttings
- Terrace
- Cracks & Gaps
- Foundation Joints
- Basement
- Water Tank
- Landscaping
- Swimming Pool
- Parapet Wall
- RCC Wall and Metal Sheet Joints
- Ponds
- Expansion Joints (Slab / Bridge)
- Corner Joints

Waterproofing of Civil Structures can be complex due to different level of construction, variable weather conditions, terrace exposure, ground water table. Performance of civil structure is influenced by soil erosion, hydrostatic pressure, decorative features, wet areas, landscaping, expansion joints, cold construction joints/cracks and core cutouts. These need to be treated with a special material with the easy system of waterproofing.

Critical Parameters Impacting Selection of Suitable System for Waterproofing in Civil Construction:



Easy to apply & selection: Single product can be applied on almost any applications, with different methodology.



Water Holding Capacity & Permeability: Can hold the water and flexible to apply on any surface, Do not permit to pass water or chemical through waterproofing membrane.



Soil Contamination: Presence of chemical impurities, porous nature of the soil, issues of subsidence of soil is incorporated under this parameter.



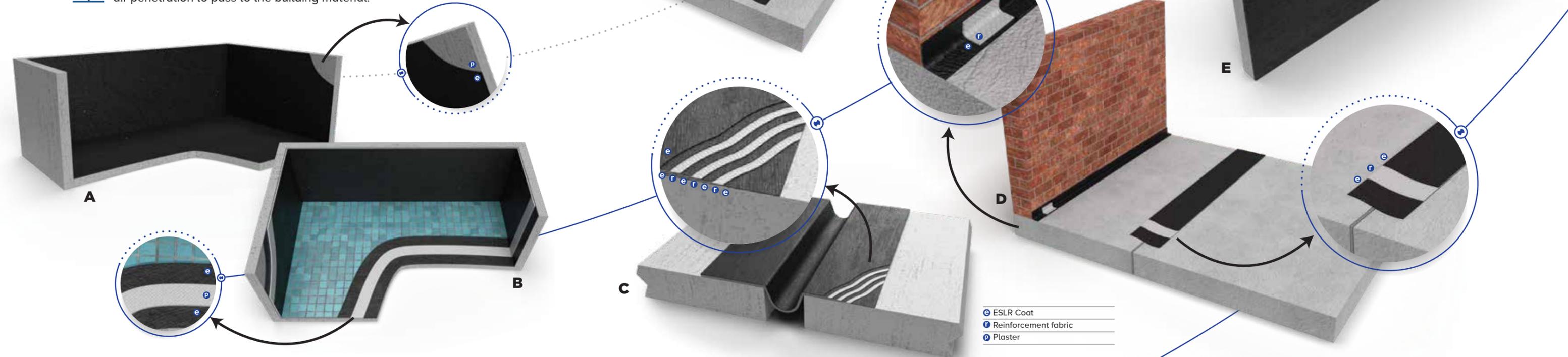
Elongation & Recovery: The property that protect structure for day to day compaction and expansion due to environmental temperature difference and micro vibrations in Mother Earth.



Gas & Air Barrier: Membrane cannot allow toxic/greenhouse gases/costal air penetration to pass to the building material.

VARIOUS APPLICATIONS SYSTEM:

- A ABOVE GROUND
- B SANDWICH SYSTEM FOR BELOW GROUND
- C EXPANSION JOINT
- D SLAB JOINT, VERTICAL WALL JOINT
- E WALL
- F CRACK JOINTS



Chemical Offshore Marine Industry

Waterproofing Corrosion Control Chemical Protection Air Barrier

- Coastal Area Environmental Protective Coating
- Toxic Fumes Protection to any civil and mechanical structure
- Chemical Storage Tank Coatings
- Resists more than 200 inorganic chemicals
- Utility Pipes & Structure Area Protection
- ETP / STP Plant Coating
- Water Tank waterproofing (Under Ground / Above Ground)
- Boat / Ship / Barge Corrosion Protection
- Port Seawater protection
- Underground fire and sealine pipes

The marine industry has plethora of challenges! Corrosion and Degradation are most common problem of chemical/offshore/marine industry. Handling chemical to seawater plays a major impact on performance of tanks, utilities, canals, ships/boat/barge, and overall seashore infrastructure and chemical process industries

Critical Parameters Impacting Selection of Suitable System for Waterproofing, Corrosion Protection and Chemical Resistance in Chemical/Offshore/Marine Industry:



Chemical Resistance: Chemical resistivity that cannot react with the chemical at certain concentration.



Permeability: Permeability to stop penetrating chemicals, vapor gases and salt/sea water



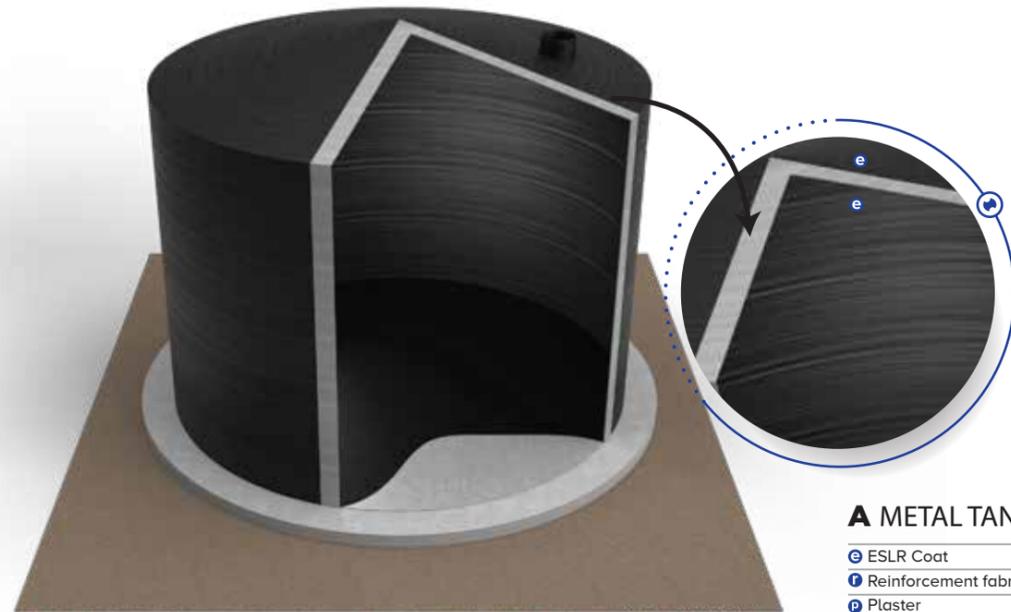
Corrosion Protection: Don't allow to pass or react with mother surface with oxygen and corrosive air/water.



Adhesion and Elongation: Best in class adhesion with elongation and recovery property to be stick with mother surface and don't crack with vibrations, compaction and expansions

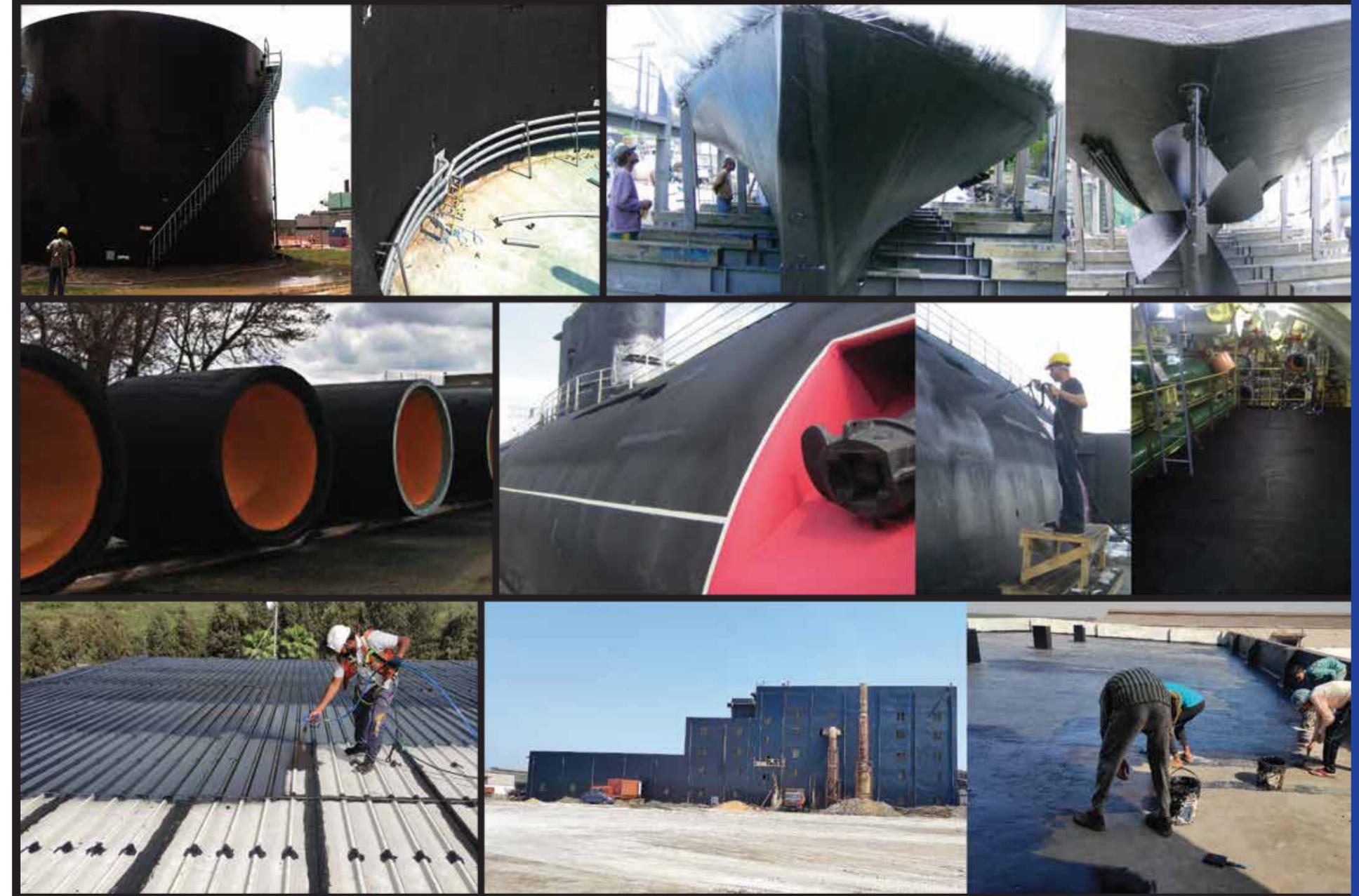


Storage Compatibility : Coating must have various chemical storage compatibility for storage application and have chemical fumes and costal air protection performance



A METAL TANK

- ⓔ ESLR Coat
- Ⓛ Reinforcement fabric
- Ⓟ Plaster



APPLICATION - **beyond limit**....!

Civil



Hospital, Mall, Large infrastructure, Bridges, Decks, Tunnels, Viaducts, Tanks, Retaining Walls, Portals, Technical Areas, Concrete Pipes, Canals

Industrial



Industrial Roofs, Rain Drainage, Piping Systems, Foundations, Chemical Processing Tanks, Chemical Storage Tanks, Processing Floors, Metal Constructions, Warehouses

Residential



Township, Roofing repair, constructions, Foundations, Gutters, Fencing, Retaining walls, Parking decks, Cellars, Tile work in wet areas (bathrooms & showers) Swimming pools, Ponds

Agricultural



Irrigation systems, Manure silos, Greenhouses, Digesters, Ponds, Planters, Retaining Wall Construction, Water Storage Facilities

Marine



Shipping Containers, Drilling Platforms, Hulls & Deck Cargo Compartments, Gangways, Ship Lamps, Chemical Processing Tanks, Chemical Storage Tanks, Beacons & Buoys, Buffers, mooring

Mining



Damp, Underground, Building/Construction, Processing Tanks, Metal Constructions Roof Construction, Warehouses, Processing Floors, Water / Chemical Utility circulation tank

OUR CLIENTS:



TATA CONSULTANCY SERVICES



adani

Ambuja Cement



NIRMA

PDPU

Schneider Electric



MOTHER DAIRY



AHLSTROM MUNKSJO

JINDAL



AIS

Asahi India Glass Ltd.

Metal Scope



Kiran group

EPACK PREFAB

everest



Friends Group

Smith Structures India Pvt. Ltd.

Ciron Drugs

TVS

RENAULT · NISSAN
JOINT VENTURE COMPANY

APM TERMINALS

TRIDENTGROUP™

METRO Wholesale

DEVASHISH INFRASTRUCTURE PVT. LTD.

COVERAGE

Coverage (Per Liter)
9 to 12 Sq Ft / Ltr
 (with two coats depending on the surface for RCC Roof and plaster wall)
12 to 15 Sq Ft / Ltr
 (with two coats depending on the surface for Roof Sheet and Metal surface)
17 to 20 Running Ft / Ltr
 (with Fabric For Roof Sheet joints, bolt holes and Rcc Cracks)

Note: The following coverage rates are approximate and for estimating purposes only, it varies with the type of surface, application procedure & applicator skills

Accelerated UV Exposure Testing as Per ASTM G155: UV index of 24 to 25

Test Sample Description	Year 1 to 7	8 th Year	9 th Year	10 th Year
Liquid Rubber Without Top Coat : 95mils or 2.41mm	No Degradation	-1% Deteriorate 2.39 mm	-1% Deteriorate 2.34 mm	-1.2% Deteriorate 2.31 mm

UV index maintain in weather accelerator is 24 to 25 Rain fall is 15 mm per 5 day cycle.

In INDIA Highest UV Index reported is 12 to 13

We warrants Elephant Shield Liquid Rubber to be free of defects in workmanship and materials only at the time of shipment from our Warehouse. No liability can be accepted for the information provided in this data although it is published in good faith and believed to be correct. The customer assumes full responsibility for quality control, testing, and determination of the suitability of products for its intended application or use.

TECHNICAL DATA

Property	Typical results
Colour	Brown to Black
Top Coat Compatibility	Passed with any water base paint or cementitious work
Specific Gravity (g/cm3)	Approximately 1.0
Odour	None
Volatile organic compound	Contains No Solvents
Solid Contain (wt.)	62% - 63%
Viscosity, Brookfield (cps)	12000-15000
Ph	10 to 12
Working Temperature	-15°C to +70°C
Chemical Resistance (ASTM G 20)	Resistant to Salt Water/fog and most inorganic solutions
Accelerated Weathering (Xenon ARC) ASTM G 155, 250 hrs	No deterioration of the film > 90% Retention of Original
Biological Resistance (ASTM E 154, ASTM D 412)	Passed
Impact Resistance CGSB 37-GP-56@23°C	Passed (168)
Vapour permeability, kg/m.sec.Pa (24 hrs)	Not Identified
Tensile Strength ASTM D 412, kPa (psi)	>830 (>120)
Elongation (%)	> 950%
Recovery (ASTM D 412) (%)	> 95%
Adhesion To Concrete Defelsco kPa (psi)	>900 (> 130), Cohesive failure
Adhesion To Steel Defelsco kPa (psi)	>890 (> 129), Cohesive failure
Puncture Resistance (CGSB 37 GP 56)	Passed (No Puncture)
Blistering ASTM D714, 1000 hrs. Exposure	None
Abrasion Resistance ASTM F 1677	Good - Very Good
Low Temperature Mandrel -10° C	Passed
Hardness Shore - A	18 - 20
Thermal Resistance ASTM C518-04 (2.66/ply)	0.028
UL Fire Rating (Ballasted)	Class A

Ask for detailed test report of Chemical Compatibility with **ELEPHANT SHIELD LIQUID RUBBER®**

TECHNICAL SPECIFICATION AND CLIENTELE



beyond limit...!



Elephant Shield's[®]
Liquid Rubber[®]

Authorised Principle - INDIA & SUBCONTINENT
COPEMAN Speciality LLP
www.elephantshield.com

Customer Support

Call : +91 8980 160 160

Email : support@elephantshield.com

